

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

COMPUTATION
of
HORIZONTAL CONTROL

NAD 83 (2002)
NAVD 88

State: North Carolina

LOCALITY

Gaston County Height Mod, 2002

Year of Observations, 2003

Year of Computations, 2003

Chief of Party: GCT/GRWAS

Observer: GCT/GRWAS

Computer: Wolfgang Ziegler

U.S. DEPARTMENT OF COMMERCE
National Oceanic & Atmospheric Administration
National Ocean Service
Charting and Geodetic Service
National Geodetic Survey

REPORT OF HORIZONTAL CONTROL COMPUTATIONS

Horizontal Network Branch

Classification: First Order

Horizontal Datum: NAD 83 (2002)

Vertical Datum: NAVD 88

Locality: Gaston County North Carolina, HTMOD 2002

35°25'38.8"
81°32'14.9" 80°50'06.4"
35°06'53.5"

Acc. No.: GPS 1689

Date of Field Work: First Observation Day 140 5/20/03 Last Observation Day 176 6/25/03

Chief of Party: Wolfgang Ziegler, Barry Zulauf, Wesley Barnhill, & Wayne Walker

***** OFFICE COMPUTATIONS *****

Acc. No.: GPS 1689

Date of Computations: 2003

Number of Stations:

New:	40	Main Scheme:	77
Old:		Supplemental:	
Horizontal Fixed:	4	Non-monumented:	
Vertical Fixed:	15	Temporary:	
Readjusted:	18		----
	----	Total:	77
Total:	77		

Free adjustment variance of unit weight (σ^2_0): 1.17

Horizontal constrained adjustment variance of unit weight (σ^2_1): 1.22

Ratio: $\sigma^2_1/\sigma^2_0 = 1.04$

Vertical constrained adjustment variance of unit weight (σ^2_2): 1.33

Ratio: $\sigma^2_2/\sigma^2_0 = 1.14$

Geodesist in charge of work

Wolfgang Ziegler
GPS data processing, Adjustments
and Analysis

Chief of Section

Chief of Branch

INTRODUCTION:

PURPOSE:

To provide reconnaissance, monument installation, GPS observations, and network adjustments in support of the NGS's 2002 Height Modernization project for Gaston County, North Carolina. Leading to a better understanding of the relationship between the GRS 80 ellipsoid and NAVD 88 orthometric elevations, which should aid in improving GPS derived elevations in the future.

TIME PERIOD:

Reconnaissance:

Arrive on site: 11/13/02
Depart: 11/19/02

Monument Installation & Additional Reconnaissance:

Arrive on site: 4/23/03
Depart: 5/03/03

GPS Observations:

Arrive on Site: 5/18/03
Depart: 5/29/03

GPS Re-observations & Repairs:

Arrive on site: 6/23/03
Depart: 6/26/03

Date of first GPS observation: 5/20/03

Date of last GPS observation: 6/25/03

POINT OF CONTACT:

Primary Contractor:

Gustin, Cothorn, & Tucker, Inc. (GCT)
121 Hart Street
Niceville, Florida 32578
(800)392-3578
Primary Contact: Wayne Walker wwalker@gctengineering.com

Sub Contractor:

GRW Aerial Surveys, Inc. (GRWAS)
801 Corporate Drive
Lexington, Kentucky 40503
(859)223-3999
Primary Contact: Wolfgang Ziegler wziegler@grwinc.com

ACCURACY STANDARDS:

First Order horizontal following 2cm HTMOD procedures.

LOCATION:

Gaston County North Carolina

Maximum Latitude N 35°25'38.8"
Minimum Latitude N 35°06'53.5"
Maximum Longitude W 081°32'14.9"
Minimum Longitude W 080°50'06.4"

GCT PERSONEL:

Wayne Walker
Executive Administration/Project Management, Field Party Chief, Project Design,
Reconnaissance, and Reporting. wwalker@gctengineering.com

David Ham
Project reporting and station descriptions (Dfile). ham@gctengineering.com

Wesley Barnhill
Field Party Chief and GPS Observations

Jimmy McKelvey
GPS Observations

Thomas McLendon
GPS Observations

Brock Mathews
GPS Observations

GRWAS PERSONEL:

Ben Fister
North Carolina P.L.S. and Executive Administration. bfister@grwinc.com

Ed Rinehart
Project Administration. erinehart@grwinc.com

Wolfgang Ziegler
Project Management, Field Party Chief, Project Design, Reconnaissance, GPS Observations,
GPS Computations, Network Adjustments, and Reporting. wziegler@grwinc.com

Barry Zulauf
Field Party Chief and GPS Observations

Malcom Smith
GPS Observations

Jay Jones
GPS Observations

Derick Roche
Reconnaissance and Station Descriptions

HARDWARE:

GPS Receiver System #1

JSIN = 001 TRIMBLE 5700 DUAL FREQUENCY GPS RECEIVER SERIAL # 220284620
JSAN = 001 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM41249.00 SERIAL # 12299834
WEATHER INSTRUMENT KESTREL MODEL # 4000 SERIAL #426871
SECO FIXED HEIGHT TRIPOD

GPS Receiver System #2

JSIN = 002 TRIMBLE 5700 DUAL FREQUENCY GPS RECEIVER SERIAL # 220284914
JSAN = 002 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM41249.00 SERIAL # 12300044
WEATHER INSTRUMENT KESTREL MODEL # 4000 SERIAL #426877
SECO FIXED HEIGHT TRIPOD

GPS Receiver System #3

JSIN = 003 TRIMBLE 5700 DUAL FREQUENCY GPS RECEIVER SERIAL # 220285241
JSAN = 003 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM41249.00 SERIAL # 12332774
WEATHER INSTRUMENT KESTREL MODEL # 4000 SERIAL #426857
SECO FIXED HEIGHT TRIPOD

GPS Receiver System #4

JSIN = 004 TRIMBLE 5700 DUAL FREQUENCY GPS RECEIVER SERIAL # 220288352
JSAN = 004 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM41249.00 SERIAL # 12337901
WEATHER INSTRUMENT KESTREL MODEL # 4000 SERIEL #426856
SECO FIXED HEIGHT TRIPOD

GPS Receiver System #5

JSIN = 005 TRIMBLE 5700 DUAL FREQUENCY GPS RECEIVER SERIAL # 220288356
JSAN = 005 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM41249.00 SERIAL # 12276105
WEATHER INSTRUMENT KESTREL MODEL # 4000 SERIEL #426880
SECO FIXED HEIGHT TRIPOD

GPS Receiver System #6

JSIN = 006 TRIMBLE 5700 DUAL FREQUENCY GPS RECEIVER SERIAL # 220288379
JSAN = 006 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM41249.00 SERIAL # 12322686
WEATHER INSTRUMENT KESTREL MODEL # 4000 SERIEL #426846
SECO FIXED HEIGHT TRIPOD

GPS Receiver System #7

JSIN = 007 TRIMBLE 4700 DUAL FREQUENCY GPS RECEIVER SERIAL # 0220256876
JSAN = 007 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM33429.20+GSERIAL # 0220257718
CHARLOTTE CORS ARP

GPS Receiver System #8

JSIN = 008 TRIMBLE 4700 DUAL FREQUENCY GPS RECEIVER SERIAL # 0220221633
JSAN = 008 TRIMBLE ZYPHER GEODETIC GPS ANTENNA MODEL TRM33429.20+GSERIAL # 0220222612
GASTON CORS ARP

COMPUTER EQUIPMENT:

Gateway SOLO Notebook Computer Serial # 0018152990

MEMOREX External CD Writer Model MRX424-WE Serial # BEAJ202300069

Hewlett Packard Calculator Model 48GX Serial #3530S01415

SOFTWARE:

TRIMBLE's GPSurvey Software Suite Version 2.35a

TRIMBLE's Dat2Rin Version 3.41

TRIMBLE's Configuration Tool Box Version 4.0.0.12

GARMIN's MapSource Version 4.06

USACOE's CORPSCON Version 5.11.08

WayPoint+ Version 1.8.03

EditPlus text editor Version 2.10

Nero Burning ROM Version 5.5.9.13

AutoCad 2000

Microsoft's Quick Basic Version 4.0

Microsoft's Excell 2000

Microsoft's Word 2000

GlobalSCAPE's CuteFTP Version 5.0 XP

NGS's ADJUST exe file date 7/21/03

NGS's BBACCUR exe file date 7/21/03

NGS's COMPGb exe file date 7/21/03

NGS's CR8SER exe file date 7/21/03
NGS's EDPREPLT exe file date 7/26/03
NGS's ELEVUP exe file date 7/21/03
NGS's ELLACC exe file date 7/21/03
NGS's MODGEE exe file date 7/21/03
NGS's NEWCHKOBS exe file date 7/21/03
NGS's OBSCHK exe file date 7/21/03
NGS's OBSDES exe file date 7/21/03
NGS's QQRECORD exe file date 7/21/03
NGS's XYZ_ENU exe file date 7/21/03
NGS's DELTAHI exe file date 1/2/98
NGS's GEOID99 exe file date 7/21/03
NGS's DSWIN Version 2.10
NGS's WDDPROC exe file date 8/9/01

GPS FIELD WORK:

There is no primary network for this project. It's proximity to two CORS stations made it unnecessary.

The first day on site was used to allow the GCT and GRWAS survey crews to become familiar with one another and the site.

The local network was observed before the secondary network because NGS benchmark K 77, which was originally to be occupied as part of the secondary network lies on railroad property. We did not have permission to occupy this station at the onset of observations. We never did gain right-of-entry. The railroad wanted an unreasonable amount of money for access rights. NGS benchmark M 77 was substituted (with permission from the contracting officer) for K 77 and was observed during the re-observation & repairs campaign.

The local network observations were performed from day 140 (5/20/03) through day 147 (5/27/03). No observations were performed on day 142 due to heavy rain.

The secondary network was observed on days 148 and 149 (5/28 and 5/29). The field crew left the site without fully completing the secondary network due to the difficulties regarding benchmark K 77. The network was completed during the re-observation & repairs campaign.

The re-observation & repairs observations were performed on days 175 and 176 (6/24 and 6/25).

Please see Attachment A "GPS Observations and Baselines at a Glance" for details concerning GPS occupations and the baselines used in the networks and baselines that were rejected.

See also Attachment B "Station List" for details regarding the stations participating in the GPS observations and Adjustments.

FIELD PROBLEMS:

Existing station WARLICK was part of the design network. It was observed and determined unsuitable for GPS observations. It was removed from the network and replaced (with permission from the contracting officer) with existing station WARLICK AZ MK that was observed during the re-observation and repair campaign.

Existing station CARLSON was part of the original design network. It was determined unsuitable for GPS observations. It was determined unnecessary and removed from the network (with permission from the contracting officer).

On day 140 session 3, J. McKelvey occupied existing station FERGUSSON AZIMUTH which was not part of the design network, instead of station FERGUSSON. The data was not used. An additional session was added to the day 141 to correct the problem.

On day 140 session 3, T. McLendon occupied U.G.S. Bench Mark 52 MLZ which was not in the design network, instead of existing station YORK. The data was not used. An additional session was added to day 141 to correct the problem.

In a few instances the GPS receiver operators "miss-started" a session causing the file names for succeeding sessions for the day to have erroneous session labels.

In a few instances the GPS receiver operators were not able to get to their next station in the time period allocated in the schedule. The operators were all in constant communication via cell phone. The schedule was adjusted on the fly as needed to provide the planned observation periods.

A number of the existing stations used, proved to be marginal for GPS observations, due to obstructions. More rigorous planning and the possible inclusion of Bench Mark eccentrics may have reduced the number of re-observations necessary to provide the desired results.

On 5/24/03 it was noted that Thomas McLendon was ending his sessions three to four minutes early. Wesley Barnhill (his party chief) was informed with a request for correction.

On the morning of 5/27/03 Jay Jones awoke to find that one of the tires on the truck that he was driving had been slit during the night. We changed the tire & rim in time to start observations as planned. The part of town we were staying in is a little in the rough side.

On 5/28/03 Barry Zulauf woke up ill. Wolfgang Ziegler took his place. There was no loss of observation time. HARN station CLT E is on airport property and requires an escort to access it. The escort was a little late arriving, causing a delay in the start of session #2.

Because we could not occupy Bench Mark K 77, Jay Jones (who was scheduled to occupy it) was instructed to occupy other stations that were part of the secondary network, in such a way as to collect useful data, not in the original plan.

FIELD DATA PROCESSING:

All GPS data for this project was collected at a five second epoch rate with a five degree elevation mask. Only non trivial (independent) baselines were processed, using the single vector processing method.

The data was down loaded, converted to RINEX, backed up to CD, and processes daily in the field as it was collected. The data was processed using TRIMBLE's GPSurvey software suite. The secondary and local networks were treated as separate projects. The broadcast ephemeris was used. The processing order started at HARN (NAD 83) stations and proceeded through the rest of the networks, seeding the baseline processing with precise coordinates derived from earlier processing sessions. This was done as a quality assurance measure, allowing us to detect gross errors in the field. As sufficient data was collected, test networks were formed and evaluated and the NGS program DeltaHI was used to compare the vertical component of repeat baselines.

OFFICE DATA PROCESSING:

Note: During their visit to NGS headquarters in Silver Spring, Maryland on July 23 & 24, 2003 Wolfgang Ziegler and Wayne Walker were given approval for the use of GPSurvey for final baseline processing in lieu of using PAGENT.

After the initial GPS observation campaign (days 140 through 149), the GPS data was reprocessed at GRWAS corporate headquarters. GPSurvey was used to process the data. This time the IGR precise ephemeris was used. The data was processed at a ten second epoch rate with a fifteen degree elevation mask. The processing scheme, emanating from CORS stations GAST and CHME, seeded with ITRF00 coordinates (EPOCH 1997). More time and attention was put into this pass on the data. Baseline integer ratios, Reference variances, residuals, DeltaHI, network adjustments (using Trimnet) and loop closures were used to evaluate the data.

Difficult lines were "hand processed" in an effort to improve the solutions. This was accomplished by adjusting start/stop times for data processing, the exclusion of questionable satellites, and by adjusting the elevation mask.

Once all acceptable base lines were determined, a list of baselines that needed to be observed or re-observed was generated and sent to GCT for observation scheduling.

During the re-observation and repair campaign (days 175 & 176) no field data processing was performed. The data was download and backed up to CD daily and brought to the GRWAS headquarters for processing.

As a final pass on all of the GPS data it was reprocessed using the IGS precise ephemeris. Again using GPSurvey, as two separate networks (secondary and local), seeding from CORS stations GAST and CHME (ITRF00 Epoch 1997) with a ten second epoch rate and a fifteen degree elevation mask. Difficult baselines were again "hand processed". The same QA/QC procedures were used to screen the data. All baselines that didn't meet the project specifications were rejected.

Two separate Bfiles and Gfiles (one for the secondary network and one for the local network) were output from GPSurvey. Neither of the Bfiles or Gfiles were complete as output. Many details e.g. meteorological data, station names, and stations SSN's needed to be cleaned up. A hand-keyed database was generated containing the missing data and custom computer programs were written to correlate the databases information with the appropriate records in the B and G files. In some instances manual edits using a text editor were made. Manual edits were avoided as much as possible, in an effort to avoid corruption due to human error. The NGS checking programs were run to verify the integrity of the files.

NETWORK ADJUSTMENTS:

All network adjustments from this point forward were performed using the NGS's program ADJUST.

A Minimally constrained (free) adjustment was performed for both the secondary and local networks. The NGS program XYZENU was also run with both data sets. The results were evaluated and found to be within project specifications.

SECONDARY NETWORK:

DEGREES OF FREEDOM	=	228
VARIANCE SUM	=	2726.8
STD.DEV.OF UNIT WEIGHT	=	3.458
VARIANCE OF UNIT WEIGHT	=	11.96

LOCAL NETWORK:

DEGREES OF FREEDOM	=	486
VARIANCE SUM	=	21135.8
STD.DEV.OF UNIT WEIGHT	=	6.595
VARIANCE OF UNIT WEIGHT	=	43.49

The NGS's program MODGEE was run to scale the standard deviations of the vectors in the Gfiles by the standard deviation of unit weight. This was performed on each network separately per Renee Shields's instructions. The scalar used for the secondary network was 3.458 and for the local network it was 6.595.

After this was done the scaled Gfiles were combined for use in the combined network adjustments. The Bfiles were also combined.

ADJUSTMENT 1_HORIZONTAL_FREE:

START WITH:

AFILEF - holding CORS station GAST fixed horizontally and ellipsoid height.

BBOOK - no 86 records combined secondary and local networks.

GFILE.MOD - vector standard deviations were scaled independently in secondary and local networks and combined.

DFILE - provided by David Ham @ GCT.

RUN CR8SER

<u>INPUT</u>	<u>OUTPUT</u>
BBOOK	SERFIL

RUN MAKE86

<u>INPUT</u>	<u>OUTPUT</u>
BBOOK	BBK.86
88	

RUN COMPGB

<u>INPUT</u>	<u>OUTPUT</u>
SERFIL	COMPGB.OUT
GFILE.MOD	
BBK.86	
N	

No errors

RUN NEWCHKOB

<u>INPUT</u>	<u>OUTPUT</u>
BBK.86	NEWCHKOB.OUT

Errors: Geoid height and code missing.
Ellipsoid order and class invalid

RUN OBSCHK

<u>INPUT</u>	<u>OUTPUT</u>
BBK.86	OBSCHK.S.OUT
GFILE.mod	OBSCHKL.OUT

Errors: Ellipsoid height order/class invalid

RUN ADJUST

Constraining CORS station GAST horizontally and ellipsoid height.

GASTON CORS ARP 35 18 39.79173N 081 11 19.54138W 213.733

<u>INPUT</u>	<u>OUTPUT</u>
BBK.86	ADJF1.OUT
AFILEF	BBKF1
GFILE.MOD	
NODFILE	

No problems noted.

RUN XYZ_ENU

INPUT
BBKF1
GFILE.MOD

OUTPUT
XYZ_ENU.OUT

No problems noted.

RUN EDPREPLT

INPUT
ADJF1.OUT
BBKF1

OUTPUT
PREPLT.OUT

No problems noted.

RUN OBSDES

INPUT
BBOOK
Y
DFILE
D

OUTPUT
OBSDES.OUT

Errors: Satellite usage code CC203 in the Dfile for CORS stations GAST and CHME are not "Y". This conflicts with WCHKdesc.

ADJUSTMENT 2_HZ_CORS_FIXED:

RUN ADJUST

Constraining CORS stations GAST and CHME horizontally and ellipsoid height at all stations with published ellipsoid heights.

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	213.733
CHARLOTTE CORS ARP	35 16 35.97214N	080 53 20.58249W	226.643
CLT E			185.450
GASPORT			211.340

INPUT
BBKF1
AFILEC1
GFILE.MOD
NODFILE

OUTPUT
ADJC1.OUT
BBKC1

No problems noted.

ADJUSTMENT 3_FULL_CONSTRAINED_HZ:

RUN ADJUST

Constraining CORS stations GAST and CHME and HARN stations CLT E and GASPORT horizontally and ellipsoid height.

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	213.733
CHARLOTTE CORS ARP	35 16 35.97214N	080 53 20.58249W	226.643
CLT E	35 12 52.65445N	080 56 36.12617W	185.450
GASPORT	35 12 02.70982N	081 09 05.07441W	211.340

INPUT
BBKC1
AFILEC2
GFILE.MOD
NODFILE

OUTPUT
ADJC2.OUT
BBKC2

No problems noted.

ADJUSTMENT 4A_VERTICAL_FREE_COMBS:

RUN WINTG (GEOID 99) to add geoid heights to the 86 records in the Bfile.

<u>INPUT</u>	<u>OUTPUT</u>
BBKF1	BBK.GHT

RUN ADJUST

Constraining CORS stations GAST horizontally and Bench Mark COMBS orthometric height

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
COMB			226.306

<u>INPUT</u>	<u>OUTPUT</u>
BBK.GHT	ADJVF1.OUT
AFILEVF1	BBKVF1
GFILE.MOD	
NODFILE	

No problems noted. The 80 records in the Bfile now have ellipsoid, geoid, and orthometric heights.

ADJUSTMENT 4B_VERTICAL_FREE_M-40:

RUN ADJUST

Constraining CORS stations GAST horizontally and Bench Mark M 40 orthometric height

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
M 40			277.037

<u>INPUT</u>	<u>OUTPUT</u>
BBK.GHT	ADJVF2.OUT
AFILEVF2	BBKVF2
GFILE.MOD	
NODFILE	

No problems noted. The 80 records in the Bfile now have ellipsoid, geoid, and orthometric heights.

ADJUSTMENT 5A_VERTICAL_CONSTRAINED:

RUN ADJUST

Constraining CORS stations GAST horizontally and all available Bench Marks with orthometric heights.

Using vertically free output Bfile from adjustment 4A.

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
ALEXIS RM 2			273.990
COMB			226.306
GAS 5			222.695
GASPORT			242.455
GROVES NCGS 1964			230.090
J 222 1982			196.554
L 222			249.881
LAKEVIEW			248.382
M 40			277.037
M 77			259.630
N 251			307.104
NO			234.210
NORTH			253.271
PRODUCE			190.364
RV 76			258.177
RV 95			193.740
T 251			249.242
W 200			268.292

INPUT
BBKVF1
AFILEVC1
GFILE.MOD
NODFILE

OUTPUT
ADJVC1.OUT
BBKVC1

Five to six centimeter vertical shifts appear particularly at the constrained Bench Marks.

ADJUSTMENT 5B_VERTICAL_CONSTRAINED:

RUN ADJUST

Constraining CORS stations GAST horizontally and all available Bench Marks with orthometric heights.

Using vertically free output Bfile from adjustment 4B to give a slightly different perspective on the UP residuals.

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
ALEXIS RM 2			273.990
COMB			226.306
GAS 5			222.695
GASPORT			242.455
GROVES NCGS 1964			230.090
J 222 1982			196.554
L 222			249.881
LAKEVIEW			248.382
M 40			277.037
M 77			259.630
N 251			307.104
NO			234.210
NORTH			253.271
PRODUCE			190.364
RV 76			258.177
RV 95			193.740
T 251			249.242
W 200			268.292

INPUT
BBKVF2
AFILEVC2
GFILE.MOD
NODFILE

OUTPUT
ADJVC2.OUT
BBKVC2

Four to five centimeter vertical shifts appear particularly at the constrained Bench Marks.

ADJUSTMENT 5C_VERTICAL_CONSTRAINED:

RUN ADJUST

Constraining CORS stations GAST horizontally and all available Bench Marks with orthometric heights except ALEXIS RM 2, GROVES NCGS 1964, and NO. These three bench marks are classified as questionable third order in the NGSDB.

Using vertically free output Bfile from adjustment 4B .

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
COMB			226.306
GAS 5			222.695
GASPORT			242.455
J 222 1982			196.554
L 222			249.881
LAKEVIEW			248.382
M 40			277.037
M 77			259.630
N 251			307.104
NORTH			253.271
PRODUCE			190.364
RV 76			258.177
RV 95			193.740
T 251			249.242
W 200			268.292

<u>INPUT</u>	<u>OUTPUT</u>
BBKVF2	ADJVC3.OUT
AFILEVC3	BBKVC3
GFILE.MOD	
NODFILE	

Four to five centimeter vertical shifts still appear particularly at the constrained Bench Marks.

ADJUSTMENT 5D_VERTICAL_CONSTRAINED:

RUN ADJUST

Constraining CORS stations GAST horizontally and all available Bench Marks with orthometric heights except ALEXIS RM 2, GROVES NCGS 1964, NO, and M 77. These four bench marks are classified as third order and questionable third order in the NGSDB. All remaining bench marks are first or second order.

Using vertically free output Bfile from adjustment 4B .

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
COMB			226.306
GAS 5			222.695
GASPORT			242.455
J 222 1982			196.554
L 222			249.881
LAKEVIEW			248.382
M 40			277.037
N 251			307.104
NORTH			253.271
PRODUCE			190.364
RV 76			258.177
RV 95			193.740
T 251			249.242
W 200			268.292

<u>INPUT</u>	<u>OUTPUT</u>
BBKVF2	ADJVC4.OUT
AFILEVC4	BBKVC4
GFILE.MOD	
NODFILE	

Vertical shifts are reduced to three centimeters or less. Unfortunately this leaves the network vertically weak in the northwest quadrant.

ADJUSTMENT 5E_VERTICAL_CONSTRAINED:

RUN ADJUST

Constraining CORS stations GAST horizontally and constraining only four perimeter benchmarks.

Using vertically free output Bfile from adjustment 4B .

GASTON CORS ARP	35 18 39.79173N	081 11 19.54138W	
J 222 1982			196.554
LAKEVIEW			248.382
M 77			259.630
NORTH			253.271

<u>INPUT</u>	<u>OUTPUT</u>
BBKVF2	ADJVC5.OUT
AFILEVC5	BBKVC5
GFILE.MOD	
NODFILE	

The vertical shift at bench mark NORTH is +3.0cm (north central to the project). The vertical shift at bench mark M 77 is -4.6 cm (west central to the project). The vertical shift at bench mark J 222 1982 is -0.6 cm (south central to the project). The vertical shift at bench mark LAKEVIEW is -0.1 cm (east central to the project). When plotted on paper, it looks like there may be a downward slope east, south, and west from benchmark NORTH. There could be a slope in the geoid model or in the leveling data.

COMMENTS:

The vertical shifts from all of the vertically constrained adjustments above (5A through 5E) were hand plotted and visually evaluated. They all show the same general sloping described for adjustment 5E above.

All of the vertically constrained adjustment output files were sent to Mr. Steve Frakes at the NGS's office in Silver Spring Maryland. Mr. Frakes indicated that he would like to use BBKVC3 (from adjustment 5C) when creating the FINAL.BBK.

ADJUSTMENT 6A_FINAL_FREE_WITH_ACCURACIES:

Copy AFILEF to AFILEQQ. Edit MM record CC5 to "N" (do not create updated BFILE) in AFILEQQ.

RUN QQRECORD

<u>INPUT</u>	<u>OUTPUT</u>
AFILEQQ	AFILEQQ (with QQ records added)
GFILE.MOD	

RUN ADJUST

Constraining CORS station GAST horizontally and ellipsoid hight.

GASTON CORS ARP 35 18 39.79173N 081 11 19.54138W 213.733

<u>INPUT</u>	<u>OUTPUT</u>
BBKC2 (output from full constrained horizontal)	ADJQQ.OUT
AFILEQQ	
GFILE.MOD	
NODFILE	

Looks good.

RUN BBACCUR2

<u>INPUT</u>	<u>OUTPUT</u>
ADJQQ.OUT	BBACCUR2.OUT

Looks good.

RUN ELLACC

<u>INPUT</u>	<u>OUTPUT</u>
ADJQQ.OUT	ELLACC.OUT

CREATE THE FILNAL.BBK:

RUN ELEVUP

<u>INPUT</u>	<u>OUTPUT</u>
BBKVC3	FINAL.BBK
BBKC2	

No problems.

EDIT FINAL.BBK

Edit CC54/55 of 86 records, inserting "41" (ellipsoid height accuracy obtained from ELLACC.OUT)

RUN CHECKING PROGRAMS ONE MORE TIME:

RUN COMPGB

<u>INPUT</u>	<u>OUTPUT</u>
SERFIL	COMPGB.OUT
GFILE.MOD	
FINAL.BBK	
N	

No errors.

RUN NEWCHKOB

<u>INPUT</u>	<u>OUTPUT</u>
FINAL.BBK	NEWCHKOB.OUT

Errors: 504 *** FATAL *** EXTRANEIOUS DATA AFTER TRAILER RECORD
Due to report added at the end of the file by GEOID99.

RUN OBSCHK

<u>INPUT</u>	<u>OUTPUT</u>
FINAL.BBK	OBSCHK.S.OUT
GFILE.MOD	OBSCHKL.OUT

No errors.

RUN OBSDES

<u>INPUT</u>	<u>OUTPUT</u>
FINAL.BBK	OBSDES.OUT
Y	
DFILE	
D	

Errors: Satellite usage code CC203 in the Dfile for CORS stations GAST and CHME are not "Y". This conflicts with WCHKdesc.

PARTING COMMENTS AND REMARKS:

As mentioned earlier, more rigorous planning and the possible inclusion of Bench Mark eccentrics may have avoided some of the re-observations and repairs. Prior to the implementation and general acceptance of GPS surveying techniques, most monuments were installed with little concern about celestial visibility. Even stations that were installed with GPS occupation in mind are subject to occlusion with time.

As most of the data collected during this project was processed using the different types of ephemerides, broadcast, IGR, and IGS, it was interesting to see what difference it made. Some lines that were difficult or impossible to get a acceptable solution out of using the broadcast ephemeris processed seamlessly when the precise ephemeris was used. Conversely, there were lines that passed muster on the first pass, using the broadcast ephemeris, which became troublesome when the precise ephemeris was used.

As a matter of 20/20 hindsight, three passes through the data are too much. It was done in an effort to "get an answer" as to what re-observations or repairs were needed as quickly as possible. It has been my experience with projects of this magnitude, that some re-observations/repairs are invariably necessary. It might be better to wait until the ephemeris that will be used for the final processing (IGS) to become available before baseline processing is begun, knowing that there will probably be a second mobilization.

Another lesson learned during the data processing has to do with the antenna phase center tables. During the early stages of the first pass of baseline processing, I did not have the correct tables for the antennas used at CORS stations GAST and CHME loaded. The baseline processor (WAVE) uses a simple antenna model as default when this occurs. The error stuck out like a sore thumb. The correct tables were loaded and the data was reprocessed with much better results.

The meteorological measurements that were recorded are unreliable. Particularly those measured with KESTREL MODEL # 4000 SERIEL #426877 (part of GPS receiver system #2). During the compilation of the data it was noted that in most cases this instrument displayed dry bulb temperatures that were less than the wet bulb temperature it displayed. Its dry bulb temperatures were generally substantially less than the readings recorded at the other stations at approximately the same time.

The station "CODE" used for stations that are already in the NGSDB is the last four digits of the PID (per Joe Evjen's suggestion). For future projects I recommend the use of a four character alpha pneumatic, as was used for the stations that were not in the NGSDB. This will make human correlation of station CODE and station name easier.

EXHIBIT B STATION LIST

SSN	STATION NAME	CODE	PID	HORIZ ORDER	VERT ORDER	CURRENT SOURCE	NORTH LATITUDE	WEST LONGITUDE	NAVD 88 HEIGHT	GEOID HEIGHT	ELLIP HEIGHT
0301	ALEXIS RM 2	3656	FA3656	1	3?	NGSDB	35°24'18.58846"	081°07'16.30636"	273.960	-31.452	242.536
2001	ANTHONY	ANTH				NEW	35°23'19.62933"	081°19'32.49652"	262.282	-31.745	230.570
0525	BANK	4790	FA4790	1		NGSDB	35°23'10.04499"	081°22'07.20929"	293.056	-31.788	261.305
2002	BAXTER	BAXT				NCGS	35°25'03.47728"	081°25'58.46296"	309.840	-31.861	278.016
2003	BEAM	BEAM				NCGS	35°25'01.55722"	081°23'08.71697"	272.520	-31.828	240.728
2004	BELMONT	BELM				NEW	35°15'06.02300"	081°02'58.18069"	209.117	-30.948	178.213
1020	CARR	CARR				NEW	35°19'56.28364"	081°09'45.90305"	239.716	-31.418	208.323
2005	CATAWBA	CATA				NEW	35°21'55.67647"	080°59'23.79667"	215.065	-31.067	184.039
2006	CHANTILLY	CHAN				NEW	35°12'36.65483"	081°12'10.27769"	240.246	-31.310	208.978
2007	CHAPEL	CHAP				NCGS	35°24'39.74829"	081°17'36.40062"	264.873	-31.734	233.170
2008	CHARLOTTE CORS ARP	CHME	AJ8051	CORS	CORS	NGSDB	35°16'35.97214"	080°53'20.58249"	257.194	-30.609	226.643
0217	CLT E	2247	AI2247	B		NGSDB	35°12'52.65445"	080°56'36.12617"	216.011	-30.609	185.450
2009	COLE NCGS 1964	3199	FA3199	2		NGSDB	35°13'54.60129"	081°13'05.35835"	234.455	-31.373	203.124
0554	COMB	1490	FA1490	2	1	NGSDB	35°17'30.14502"	081°11'15.93010"	226.306	-31.414	194.919
2010	CRAMER	CRAM				NEW	35°13'22.08302"	081°05'00.08301"	228.076	-31.002	197.119
2011	CRAWFORD	CRAW				NEW	35°10'14.29650"	081°13'28.70847"	233.479	-31.292	202.242
1021	DALLAS	DALL				NEW	35°20'15.71953"	081°06'34.26297"	242.608	-31.298	211.339
2012	DELMAC	DELM				NEW	35°23'24.99695"	081°25'44.51676"	306.297	-31.839	274.495
1025	DOOLEY	DOOL				NEW	35°17'35.73149"	081°08'02.95619"	235.446	-31.279	204.197
2013	DUKECO	DUKE				NEW	35°18'01.81594"	081°20'24.51480"	286.126	-31.645	254.520
2014	FISHCAMP AZ MK	4800	FA4800	2		NGSDB	35°20'46.71148"	081°24'49.26513"	279.634	-31.795	247.876
1012	FRIDAY	FRID				NEW	35°22'11.14932"	081°11'07.99870"	203.847	-31.515	172.354
0093	FROGLEVEL	4801	FA4801	1		NGSDB	35°23'59.28916"	080°58'30.23228"	238.866	-31.113	207.798
0594	FURGUSSON	4380	FA4380	1		NGSDB	35°09'41.46912"	081°16'10.50719"	251.791	-31.339	220.506
0604	GAS 5	1495	FA1495		1	NGSDB	35°19'25.21396"	081°11'34.85238"	222.695	-31.467	191.244
2015	GASLIN	GASL				NEW	35°24'18.45445"	081°05'02.72452"	248.517	-31.373	217.177
0111	GASPORT	3603	FA3603	A	2	NGSDB	35°12'02.70982"	081°09'05.07441"	242.455	-31.168	211.340
2016	GASTON CORS ARP	GAST	DE8425	CORS	CORS	NGSDB	35°18'39.79173"	081°11'19.54138"	245.153	-31.444	213.733
2017	GLOVER	GLOV				NEW	35°11'07.63425"	081°06'06.72085"	221.951	-31.000	190.999
0620	GROVES NCGS 1964	3095	FA3095	2	3?	NGSDB	35°15'38.65133"	081°05'53.83857"	230.137	-31.109	199.063
1035	HAVEN	HAVE				NEW	35°09'34.24894"	081°09'05.83565"	227.071	-31.111	196.014
2018	HINES	HINE				NCGS	35°24'19.98377"	081°02'25.94469"	228.773	-31.276	197.534
1013	HOYLE	HOYL				NEW	35°22'08.25529"	081°08'05.08209"	234.675	-31.419	203.282
2019	HUB	HUBB				NEW	35°19'53.46997"	081°14'46.33919"	273.473	-31.552	241.948
2020	IRON	IRON				NCGS	35°24'23.64494"	081°09'40.39738"	260.202	-31.528	228.697

EXHIBIT B STATION LIST

SSN	STATION NAME	CODE	PID	HORIZ ORDER	VERT ORDER	CURRENT SOURCE	NORTH LATITUDE	WEST LONGITUDE	NAVD 88 HEIGHT	GEOID HEIGHT	ELLIP HEIGHT
0133	J 222 1982	1538	FA1538		2	NGSDB	35°10'10.59199"	081°11'44.60173"	196.554	-31.238	165.373
2021	KINLEY	KINL				NEW	35°22'00.03220"	081°17'11.70887"	280.474	-31.657	248.847
0148	L 222	1535	FA1535	1	2	NGSDB	35°14'00.59099"	081°11'34.85793"	249.881	-31.326	218.586
2022	LAKEVIEW	7830	AC7830	2	2	NGSDB	35°20'21.94291"	080°50'06.47230"	248.382	-30.671	217.773
0660	M 40	0780	FA0780		1	NGSDB	35°17'05.26182"	081°17'10.44768"	277.037	-31.548	245.536
2023	M 77	0930	FA0930	1	3	NGSDB	35°17'53.47467"	081°32'14.87787"	259.630	-31.864	227.858
2024	MADORA	MADO				NEW	35°17'23.88236"	081°01'30.40467"	199.350	-30.961	168.432
2025	N 251	1480	FA1480		1	NGSDB	35°15'25.03815"	081°19'41.21408"	307.104	-31.557	275.597
0172	NEARLY	4823	FA4823	1		NGSDB	35°09'18.25032"	081°06'50.33634"	205.943	-30.991	175.004
2026	NO	5038	FA5038	2	3?	NGSDB	35°15'41.46532"	081°27'49.80858"	234.236	-31.773	202.524
0673	NORTH	4825	FA4825	1	2	NGSDB	35°24'36.50108"	081°12'11.06715"	253.271	-31.597	221.691
2027	ORCHARD	ORCH				NEW	35°14'39.49058"	081°15'56.89415"	265.687	-31.456	234.277
1022	PARSON	PARS				NEW	35°20'37.64861"	081°03'47.99679"	220.920	-31.187	189.763
1033	PINNACLE	PINN				NEW	35°12'03.87333"	081°18'08.08952"	294.858	-31.433	263.473
2028	POINT NCGS 1965	3168	FA3168	2		NGSDB	35°12'22.22424"	081°01'39.80798"	217.590	-30.816	186.820
0499	PRODUCE	0316	FA0316	2	2	NGSDB	35°06'53.55573"	080°57'44.33689"	190.364	-30.503	159.888
1011	PUETTS	PUET				NEW	35°22'22.75023"	081°14'03.07344"	266.392	-31.589	234.829
2029	PULLOFF	5066	FA5066	2		NGSDB	35°20'32.06646"	081°27'26.11625"	275.393	-31.835	243.606
2030	RALPH	RALP				NEW	35°12'09.25579"	081°15'11.39493"	229.167	-31.379	197.834
1026	REDLAIR	REDL				NEW	35°18'01.85746"	081°04'48.42707"	243.364	-31.133	212.263
2031	REESE	REES				NEW	35°10'13.75628"	081°01'14.11828"	210.032	-30.735	179.344
2032	REPENTER	REPE				NCGS	35°24'46.14324"	081°15'10.67913"	253.449	-31.675	221.800
0713	RHYNE	2594	FA2594	1		NGSDB	35°17'26.37769"	080°58'08.08316"	210.845	-30.822	180.073
0637	ROBINSON	4833	FA4833	1		NGSDB	35°25'38.75749"	081°24'44.57789"	294.085	-31.853	262.269
2033	RUTLEDGE	RUTL				NEW	35°22'29.93293"	081°02'32.83707"	211.840	-31.210	180.666
0723	RV 76	0787	FA0787		1	NGSDB	35°17'06.00492"	081°14'25.07858"	258.177	-31.487	226.740
0239	RV 95	0817	FA0817		1	NGSDB	35°14'17.94693"	081°01'28.72806"	193.740	-30.857	162.928
2034	SALUDA	SALU				NEW	35°14'11.29420"	081°08'24.86420"	220.195	-31.192	189.045
2035	SHEAR	5087	FA5087	2		NGSDB	35°14'33.23474"	081°19'21.11642"	282.406	-31.526	250.927
2036	SHOALS	SHOA				NCGS	35°25'09.15234"	081°20'51.79776"	263.626	-31.802	231.857
1014	SNAKE	SNAK				NEW	35°22'12.56760"	081°05'10.85344"	241.998	-31.307	210.721
1005	SUNNYSIDE	SUNN				NEW	35°19'36.58616"	081°18'07.56150"	265.347	-31.628	233.751
0760	T 251	1487	FA1487		1	NGSDB	35°15'42.84414"	081°12'01.38322"	249.242	-31.388	217.886
0263	TANK NCGS 1965	3149	FA3149	2		NGSDB	35°16'19.83015"	081°09'36.92853"	251.447	-31.313	220.170
2037	TEAK	TEAK				NEW	35°11'12.55816"	081°03'37.20714"	211.477	-30.880	180.645
0125	W 200	1473	FA1473	1	1	NGSDB	35°10'05.36275"	081°27'02.08668"	268.292	-31.637	236.712

EXHIBIT B STATION LIST

SSN	STATION NAME	CODE	PID	HORIZ ORDER	VERT ORDER	CURRENT SOURCE	NORTH LATITUDE	WEST LONGITUDE	NAVD 88 HEIGHT	GEOID HEIGHT	ELLIP HEIGHT
2038	WARLICK AZ MK	4839	FA4839	2		NGSDB	35°19'52.39101"	081°21'20.48403"	303.106	-31.706	271.437
0792	WHITERSPOONS	4843	FA4843	2		NGSDB	35°21'12.58477"	081°20'10.41181"	291.108	-31.710	259.435
2039	WILLOW		WILL			NEW	35°09'00.08434"	081°04'56.60299"	209.894	-30.892	179.053
2040	WINDERMERE		WIND			NEW	35°19'27.22173"	081°01'00.39127"	214.169	-31.021	183.190
0299	WYLIE AZ MK	4845	FA4845	1		NGSDB	35°09'16.67119"	081°03'14.92408"	192.021	-30.814	161.255
0679	YORK	4846	FA4846	1		NGSDB	35°09'37.22484"	081°19'38.20647"	265.373	-31.414	234.012

NOTE: The coordinates listed above were extracted from the "FINAL.BBK" for this project. Heights are in meters.

EXHIBIT A GPS OBSERVATIONS AND BASELINES AT A GLANCE

BEGIN LOCAL NETWORK OBSERVATIONS

DAY 140 GPS WEEK 1219 TUESDAY 5/20/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2012	DELM1400.030	46201400.DAT	JJ	001	001	5/20/03	11:26	12:17	1.853M	17.3C	14.6C	64.0	29.22IN
2002	BAXT1400.030	49141400.DAT	MS	002	002	5/20/03	11:22	12:16	1.853M	10.0C	12.0C	75.0	29.21IN
0637	48331400.030	52411400.DAT	BZ	003	003	5/20/03	11:21	12:17	1.853M	16.3C	12.2C	73.2	29.26IN
2003	BEAM1400.030	83521400.DAT	WB	004	004	5/20/03	11:23	12:16	1.853M	19.2C	15.2C	60.2	29.34IN
2014	48001400.030	83561400.DAT	JM	005	005	5/20/03	11:33	12:16	1.853M	14.5C	11.9C	76.4	29.31IN
0525	47901400.030	83791400.DAT	TM	006	006	5/20/03	11:13	12:10	1.853M	15.3C	14.1C	61.3	29.27IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2014	FISHCAMP AZ MK	48001400.030	0525	BANK	47901400.030	5/20/03	11:33	12:10	
2003	BEAM	BEAM1400.030	0637	ROBINSON	48331400.030	5/20/03	11:23	12:16	
0637	ROBINSON	48331400.030	2002	BAXTER	BAXT1400.030	5/20/03	11:23	12:16	
2002	BAXTER	BAXT1400.030	2012	DELMAC	DELM1400.030	5/20/03	11:26	12:16	
2012	DELMAC	DELM1400.030	2014	FISHCAMP AZ MK	48001400.030	5/20/03	11:33	12:16	

DAY 140 GPS WEEK 1219 TUESDAY 5/20/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2014	48001401.030	49141401.DAT	MS	002	002	5/20/03	12:55	13:46	1.853M	09.3C	14.6C	46.7	29.33IN
2025	14801401.030	52411401.DAT	BZ	003	003	5/20/03	12:56	13:46	1.853M	18.2C	12.3C	49.6	29.21IN
0792	48431401.030	83521401.DAT	WB	004	004	5/20/03	12:48	13:45	1.853M	17.3C	11.8C	45.2	29.26IN
2013	DUKE1401.030	83561401.DAT	JM	005	005	5/20/03	13:01	13:45	1.853M	19.5C	14.8C	58.9	29.29IN
1005	SUNN1401.030	83791401.DAT	TM	006	006	5/20/03	12:44	13:41	1.853M	16.9C	11.8C	53.2	29.37IN

Station WARLICK was observed but the data was not used. WARLICK was determined unsuitable for GPS observations. It was replaced by WARLICK AZ MK which was observed on days 175 & 176.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1005	SUNNYSIDE	SUNN1401.030	2013	DUKECO	DUKE1401.030	5/20/03	13:01	13:41
2013	DUKECO	DUKE1401.030	2025	N 251	14801401.030	5/20/03	13:01	13:45
0792	WHITERSPOONS	48431401.030	2014	FISHCAMP AZ MK	48001401.030	5/20/03	12:55	13:45
2013	DUKECO	DUKE1401.030	0792	WHITERSPOONS	48431401.030	5/20/03	13:01	13:45

DAY 140 GPS WEEK 1219 TUESDAY 5/20/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0660	07801402.030	46201402.DAT	JJ	001	001	5/20/03	14:19	15:16	1.853M	24.0C	15.9C	34.5	29.33IN
1005	SUNN1402.030	49141402.DAT	MS	002	002	5/20/03	14:25	15:16	1.853M	08.8C	15.8C	35.6	29.40IN
1033	PINN1402.030	52411402.DAT	BZ	003	003	5/20/03	14:10	15:17	1.853M	20.4C	14.9C	48.1	29.25IN
2025	14801403.030	83521403.DAT	WB	004	004	5/20/03	14:17	15:15	1.853M	22.4C	14.8C	42.5	29.23IN
2027	ORCH1402.030	83561402.DAT	JM	005	005	5/20/03	14:28	15:15	1.853M	24.4C	14.6C	31.9	29.36IN
2035	50871402.030	83791402.DAT	TM	006	006	5/20/03	14:10	15:14	1.853M	21.9C	14.1C	41.3	29.31IN

Receiver JSIN 004 miss-started a session Trimble file 83521402.dat no data not used. Throws off following session numbers in file names for this receiver by one.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2035	SHEAR	50871402.030	2025	N 251	14801403.030	5/20/03	14:18	14:50	
2035	SHEAR	50871402.030	2027	ORCHARD	ORCH1402.030	5/20/03	14:28	15:14	
2035	SHEAR	50871402.030	1033	PINNACLE	PINN1402.030	5/20/03	14:10	15:14	
0660	M 40	07801402.030	1005	SUNNYSIDE	SUNN1402.030	5/20/03	14:25	15:16	

DAY 140 GPS WEEK 1219 TUESDAY 5/20/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2030	RALP1403.030	46201403.DAT	JJ	001	001	5/20/03	15:40	16:46	1.853M	23.0C	18.3C	44.3	29.50IN
2027	ORCH1403.030	49141403.DAT	MS	002	002	5/20/03	15:53	16:45	1.853M	07.9C	15.3C	36.7	29.40IN
1033	PINN1404.030	83521404.DAT	WB	004	004	5/20/03	15:42	16:45	1.853M	24.5C	16.5C	45.0	29.24IN

Receiver JSIN 003 occupied station CRAWFORD this session, data not used.

Receiver JSIN 005 occupied the wrong station, data not used.

Receiver JSIN 006 occupied the wrong station, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2027	ORCHARD	ORCH1403.030	2030	RALPH	RALP1403.030	5/20/03	15:53	16:45	
2030	RALPH	RALP1403.030	1033	PINNACLE	PINN1404.030	5/20/03	15:42	16:45	

DAY 140 GPS WEEK 1219 TUESDAY 5/20/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0111	36031404.030	46201404.DAT	JJ	001	001	5/20/03	17:19	18:15	1.853M	25.0C	18.0C	43.9	29.40IN
2006	CHAN1404.030	49141404.DAT	MS	002	002	5/20/03	17:21	18:16	1.853M	12.5C	18.9C	38.6	29.44IN
0172	48231404.030	52411404.DAT	BZ	003	003	5/20/03	17:19	18:17	1.853M	27.1C	18.5C	41.2	29.51IN
0133	15381405.030	83521405.DAT	WB	004	004	5/20/03	17:21	18:15	3.153M	35.7C	21.9C	30.0	29.54IN
1035	HAVE1404.030	83561404.DAT	JM	005	005	5/20/03	17:23	18:15	1.853M	31.2C	21.4C	31.9	29.45IN
2011	CRAW1404.030	83791404.DAT	TM	006	006	5/20/03	17:10	18:13	1.853M	23.8C	18.3C	45.6	29.44IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1035	HAVEN	HAVE1404.030	0111	GASPORT	36031404.030	5/20/03	17:23	17:50
2011	CRAWFORD	CRAW1404.030	0133	J 222 1982	15381405.030	5/20/03	17:21	18:13
1035	HAVEN	HAVE1404.030	0172	NEARLY	48231404.030	5/20/03	17:23	18:15
0133	J 222 1982	15381405.030	1035	HAVEN	HAVE1404.030	5/20/03	17:23	18:15
2006	CHANTILLY	CHAN1404.030	0133	J 222 1982	15381405.030	5/20/03	17:21	18:15

DAY 140 GPS WEEK 1219 TUESDAY 5/20/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0148	15351405.030	46201405.DAT	JJ	001	001	5/20/03	18:39	19:45	1.853M	25.9C	18.7C	48.1	29.37IN
0760	14871405.030	49141405.DAT	MS	002	002	5/20/03	18:54	19:46	1.853M	12.3C	19.1C	35.7	29.39IN
2006	CHAN1405.030	52411405.DAT	BZ	003	003	5/20/03	18:51	19:47	1.853M	26.4C	16.6C	43.5	29.37IN
2009	31991406.030	83521406.DAT	WB	004	004	5/20/03	18:45	19:45	1.853M	24.0C	17.5C	46.0	29.39IN
2034	SALU1405.030	83561405.DAT	JM	005	005	5/20/03	18:51	19:46	1.853M	32.5C	20.6C	33.6	29.46IN
2030	RALP1405.030	83791405.DAT	TM	006	006	5/20/03	18:31	19:40	1.853M	26.8C	18.2C	43.3	29.43IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2009	COLE NCGS 1964	31991406.030	0760	T 251	14871405.030	5/20/03	18:54	19:25	
2030	RALPH	RALP1405.030	2006	CHANTILLY	CHAN1405.030	5/20/03	18:51	19:40	
0148	L 222	15351405.030	2034	SALUDA	SALU1405.030	5/20/03	18:51	19:45	
2006	CHANTILLY	CHAN1405.030	0148	L 222	15351405.030	5/20/03	18:51	19:45	
2006	CHANTILLY	CHAN1405.030	2009	COLE NCGS 1964	31991406.030	5/20/03	18:51	19:45	

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901410.030	46201410.DAT	JJ	001	001	5/21/03	11:30	12:16	1.853M	19.7C	16.7C	74.5	29.35IN
0660	07801410.030	49141410.DAT	MS	002	002	5/21/03	11:24	12:15	1.853M	14.9C	15.8C	77.9	29.18IN
2009	31991410.030	52411410.DAT	BZ	003	003	5/21/03	11:14	12:17	1.853M	19.1C	17.4C	84.2	29.32IN
0723	07871410.030	83521410.DAT	WB	004	004	5/21/03	11:20	12:15	1.853M	18.9C	15.8C	77.3	29.25IN
2027	ORCH1410.030	83791410.DAT	TM	006	006	5/21/03	11:23	12:12	1.853M	17.2C	15.1C	79.2	29.24IN
2016	GAST1410.030			008	008	5/21/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 005 occupied station T 251 session, data not used.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2027	ORCHARD	ORCH1410.030	0660	M 40	07801410.030	5/21/03	11:24	12:12
2027	ORCHARD	ORCH1410.030	2009	COLE NCGS 1964	31991410.030	5/21/03	11:23	12:12
0723	RV 76	07871410.030	2027	ORCHARD	ORCH1410.030	5/21/03	11:45	12:12
0554	COMB	14901410.030	0723	RV 76	07871410.030	5/21/03	11:45	12:15
2016	GASTON CORS ARP	GAST1410.030	0554	COMB	14901410.030	5/21/03	11:30	12:16

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1011	PUET1411.030	46201411.DAT	JJ	001	001	5/21/03	12:40	13:45	1.853M	20.1C	16.8C	68.2	29.22IN
2001	ANTH1411.030	49141411.DAT	MS	002	002	5/21/03	12:54	13:45	1.853M	18.0C	20.3C	63.4	29.24IN
0723	07871411.030	52411411.DAT	BZ	003	003	5/21/03	12:43	13:47	1.853M	20.0C	17.1C	81.0	29.25IN
2021	KINL1411.030	83521411.DAT	WB	004	004	5/21/03	12:50	13:52	1.853M	19.3C	15.9C	69.0	29.17IN
2019	HUBB1411.030	83561411.DAT	JM	005	005	5/21/03	12:54	13:46	1.853M	20.3C	17.4C	72.1	29.19IN
1005	SUNN1411.030	83791411.DAT	TM	006	006	5/21/03	12:45	13:42	1.853M	19.3C	15.7C	73.3	29.23IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2021	KINLEY	KINL1411.030	1005	SUNNYSIDE	SUNN1411.030	5/21/03	12:50	13:42
2019	HUB	HUBB1411.030	1011	PUETTS	PUET1411.030	5/21/03	12:54	13:45
2021	KINLEY	KINL1411.030	2001	ANTHONY	ANTH1411.030	5/21/03	12:55	13:45
1011	PUETTS	PUET1411.030	2021	KINLEY	KINL1411.030	5/21/03	12:50	13:45
2019	HUB	HUBB1411.030	0723	RV 76	07871411.030	5/21/03	12:54	13:46

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2007	CHAP1412.030	46201412.DAT	JJ	001	001	5/21/03	14:12	15:15	1.853M	22.0C	17.0C	60.8	29.23IN
2003	BEAM1412.030	49141412.DAT	MS	002	002	5/21/03	14:23	15:15	1.853M	15.4C	17.4C	69.2	29.22IN
0792	48431412.030	52411412.DAT	BZ	003	003	5/21/03	14:21	15:16	1.853M	20.4C	17.4C	76.7	29.14IN
2036	SHOA1412.030	83521412.DAT	WB	004	004	5/21/03	14:19	15:16	1.853M	21.6C	17.3C	63.5	29.23IN
2001	ANTH1412.030	83561412.DAT	JM	005	005	5/21/03	14:27	15:16	1.853M	24.1C	19.0C	60.7	29.23IN
0525	47901412.030	83791412.DAT	TM	006	006	5/21/03	14:10	15:14	1.853M	20.8C	16.9C	62.4	29.13IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2003	BEAM	BEAM1412.030	0525	BANK	47901412.030	5/21/03	14:23	15:14
2007	CHAPEL	CHAP1412.030	2001	ANTHONY	ANTH1412.030	5/21/03	14:27	15:15
2007	CHAPEL	CHAP1412.030	2036	SHOALS	SHOA1412.030	5/21/03	14:19	15:15
2036	SHOALS	SHOA1412.030	2003	BEAM	BEAM1412.030	5/21/03	14:23	15:15
2001	ANTHONY	ANTH1412.030	0792	WHITERSPOONS	48431412.030	5/21/03	14:27	15:16

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1012	FRID1413.030	46201413.DAT	JJ	001	001	5/21/03	15:55	16:47	1.853M	24.5C	20.0C	66.7	29.42IN
2007	CHAP1413.030	49141413.DAT	MS	002	002	5/21/03	15:50	16:45	1.853M	15.6C	17.6C	71.1	29.27IN
1011	PUET1413.030	52411413.DAT	BZ	003	003	5/21/03	15:52	16:46	1.853M	21.1C	18.0C	74.6	29.20IN
0673	48251413.030	83521413.DAT	WB	004	004	5/21/03	15:48	16:45	1.853M	23.2C	18.2C	60.8	29.25IN
2032	REPE1413.030	83561413.DAT	JM	005	005	5/21/03	15:55	16:46	1.853M	22.7C	18.8C	62.1	29.25IN
2021	KINL1413.030	83791413.DAT	TM	006	006	5/21/03	15:35	16:37	1.853M	21.4C	16.8C	68.2	29.16IN

BASELINES USED

FROM STATION		TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2032	REPENTER	REPE1413.030	2021	KINLEY	KINL1413.030	5/21/03	15:55	16:37
1012	FRIDAY	FRID1413.030	0673	NORTH	48251413.030	5/21/03	15:55	16:45
2032	REPENTER	REPE1413.030	2007	CHAPEL	CHAP1413.030	5/21/03	15:55	16:45
0673	NORTH	48251413.030	2032	REPENTER	REPE1413.030	5/21/03	15:55	16:45
1012	FRIDAY	FRID1413.030	1011	PUETTS	PUET1413.030	5/21/03	15:55	16:46

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901414.030	46201414.DAT	JJ	001	001	5/21/03	17:03	18:16	1.853M	23.8C	19.0C	67.0	29.33IN
2019	HUBB1414.030	49141414.DAT	MS	002	002	5/21/03	17:20	18:15	1.853M	17.4C	19.5C	69.2	29.24IN
1020	CARR1414.030	52411414.DAT	BZ	003	003	5/21/03	17:16	18:16	1.853M	22.5C	19.7C	77.2	29.28IN
1013	HOYL1414.030	83521414.DAT	WB	004	004	5/21/03	17:19	18:16	1.853M	27.2C	22.3C	64.8	29.30IN
1012	FRID1414.030	83561414.DAT	JM	005	005	5/21/03	17:25	18:15	1.853M	24.0C	20.1C	63.4	29.41IN
0604	14951414.030	83791414.DAT	TM	006	006	5/21/03	17:09	18:13	1.853M	22.8C	19.1C	70.5	29.35IN
2016	GAST1410.030			008	008	5/21/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0604	GAS 5	14951414.030	2019	HUB	HUBB1414.030	5/21/03	17:20	18:13	
0604	GAS 5	14951414.030	1012	FRIDAY	FRID1414.030	5/21/03	17:25	18:13	
0604	GAS 5	14951414.030	0554	COMB	14901414.030	5/21/03	17:09	18:13	
2016	GASTON CORS ARP	GAST1410.030	0604	GAS 5	14951414.030	5/21/03	17:09	18:13	
1012	FRIDAY	FRID1414.030	1013	HOYLE	HOYL1414.030	5/21/03	17:25	18:15	
1020	CARR	CARR1414.030	1012	FRIDAY	FRID1414.030	5/21/03	17:25	18:15	
2016	GASTON CORS ARP	GAST1410.030	1020	CARR	CARR1414.030	5/21/03	17:16	18:16	
2016	GASTON CORS ARP	GAST1410.030	0554	COMB	14901414.030	5/21/03	17:03	18:16	

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0620	30951415.030	46201415.DAT	JJ	001	001	5/21/03	18:38	19:55	1.853M	20.9C	18.8C	80.0	29.30IN
0554	14901415.030	49141415.DAT	MS	002	002	5/21/03	18:39	19:55	1.853M	18.5C	20.8C	66.1	29.37IN
1025	DOOL1415.030	52411415.DAT	BZ	003	003	5/21/03	18:39	19:56	1.853M	19.2C	18.9C	98.6	29.28IN
1021	DALL1415.030	83521415.DAT	WB	004	004	5/21/03	18:44	19:54	1.853M	21.3C	18.1C	72.0	29.25IN
1020	CARR1415.030	83561415.DAT	JM	005	005	5/21/03	18:49	19:55	1.853M	28.5C	21.5C	53.5	29.27IN
0263	31491416.030	83791416.DAT	TM	006	006	5/21/03	19:09	19:53	1.853M	19.5C	17.4C	92.0	29.23IN
2016	GAST1410.030			008	008	5/21/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 006 miss-started a session, pushing the session designator in the file name off by one.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0554	COMB	14901415.030	0263	TANK NCGS 1965	31491416.030	5/21/03	19:09	19:53	
1020	CARR	CARR1415.030	1021	DALLAS	DALL1415.030	5/21/03	18:49	19:54	
2016	GASTON CORS ARP	GAST1410.030	1020	CARR	CARR1415.030	5/21/03	18:49	19:55	
1025	DOOLEY	DOOL1415.030	0620	GROVES NCGS 1964	30951415.030	5/21/03	18:39	19:55	
1020	CARR	CARR1415.030	1025	DOOLEY	DOOL1415.030	5/21/03	18:49	19:55	
2016	GASTON CORS ARP	GAST1410.030	0554	COMB	14901415.030	5/21/03	18:39	19:55	

DAY 141 GPS WEEK 1219 WEDNESDAY 5/21/03 SESSION 6

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2030	RALP1416.030	46201416.DAT	JJ	001	001	5/21/03	20:24	21:36	1.853M	22.9C	19.8C	74.0	29.29IN
2027	ORCH1416.030	49141416.DAT	MS	002	002	5/21/03	20:41	21:35	1.853M	15.7C	17.3C	77.8	29.16IN
2011	CRAW1416.030	52411416.DAT	BZ	003	003	5/21/03	20:35	21:36	1.853M	19.9C	19.9C	99.9	29.29IN
1033	PINN1416.030	83521416.DAT	WB	004	004	5/21/03	20:49	21:38	1.853M	22.7C	17.4C	60.2	29.07IN
0594	43801416.030	83561416.DAT	JM	005	005	5/21/03	20:41	21:36	1.853M	21.1C	18.1C	79.7	29.21IN
0679	48461417.030	83791417.DAT	TM	006	006	5/21/03	20:29	21:32	1.853M	22.7C	19.1C	82.0	29.17IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
0679	YORK	48461417.030	0594	FURGUSSON	43801416.030	5/21/03	20:41	21:32
1033	PINNACLE	PINN1416.030	0679	YORK	48461417.030	5/21/03	20:49	21:32
2027	ORCHARD	ORCH1416.030	2030	RALPH	RALP1416.030	5/21/03	20:41	21:35
2030	RALPH	RALP1416.030	1033	PINNACLE	PINN1416.030	5/21/03	20:49	21:36
0594	FURGUSSON	43801416.030	2011	CRAWFORD	CRAW1416.030	5/21/03	20:41	21:36

DAY 143 GPS WEEK 1219 FRIDAY 5/23/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2004	BELM1430.030	46201430.DAT	JJ	001	001	5/23/03	11:15	12:16	1.853M	17.9C	13.9C	71.6	29.28IN
0760	14871430.030	49141430.DAT	MS	002	002	5/23/03	11:22	12:15	1.853M	13.6C	13.9C	95.0	29.17IN
2034	SALU1430.030	52411430.DAT	BZ	003	003	5/23/03	11:19	12:16	1.853M	15.0C	14.8C	98.2	29.25IN
0620	30951430.030	83521430.DAT	WB	004	004	5/23/03	11:23	12:15	1.853M	15.3C	12.9C	79.0	29.23IN
0263	31491430.030	83561430.DAT	JM	005	005	5/23/03	11:24	12:15	1.853M	19.3C	15.1C	80.5	29.16IN
0111	36031430.030	83791430.DAT	TM	006	006	5/23/03	11:11	12:07	1.853M	15.2C	14.1C	92.1	29.18IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2034	SALUDA	SALU1430.030	0111	GASPORT	36031430.030	5/23/03	11:20	12:07
0760	T 251	14871430.030	0263	TANK NCGS 1965	31491430.030	5/23/03	11:24	12:15
0263	TANK NCGS 1965	31491430.030	2034	SALUDA	SALU1430.030	5/23/03	11:24	12:15
0620	GROVES NCGS 1964	30951430.030	2004	BELMONT	BELM1430.030	5/23/03	11:23	12:15
2034	SALUDA	SALU1430.030	0620	GROVES NCGS 1964	30951430.030	5/23/03	11:23	12:15

DAY 143 GPS WEEK 1219 FRIDAY 5/23/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2037	TEAK1431.030	46201431.DAT	JJ	001	001	5/23/03	12:53	13:46	1.853M	19.5C	15.8C	66.5	29.29IN
0111	36031431.030	49141431.DAT	MS	002	002	5/23/03	12:49	13:46	1.853M	14.6C	15.5C	87.2	29.21IN
2039	WILL1431.030	52411431.DAT	BZ	003	003	5/23/03	12:45	13:47	1.853M	16.1C	15.2C	91.0	29.30IN
2017	GLOV1431.030	83521431.DAT	WB	004	004	5/23/03	12:47	13:44	1.853M	17.4C	13.8C	67.0	29.26IN
0172	48231431.030	83561431.DAT	JM	005	005	5/23/03	12:54	13:46	1.853M	21.0C	14.8C	67.1	29.30IN
0299	48451431.030	83791431.DAT	TM	006	006	5/23/03	12:53	13:42	1.853M	18.1C	15.2C	82.1	29.37IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0299	WYLIE AZ MK	48451431.030	2039	WILLOW	WILL1431.030	5/23/03	12:53	13:42	
2017	GLOVER	GLOV1431.030	2037	TEAK	TEAK1431.030	5/23/03	12:53	13:44	
0111	GASPORT	36031431.030	2017	GLOVER	GLOV1431.030	5/23/03	12:49	13:44	
2039	WILLOW	WILL1431.030	0172	NEARLY	48231431.030	5/23/03	12:54	13:46	

DAY 143 GPS WEEK 1219 FRIDAY 5/23/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2010	CRAM1432.030	49141432.DAT	MS	002	002	5/23/03	14:18	15:15	1.853M	14.3C	15.7C	79.3	29.26IN
2037	TEAK1432.030	83521432.DAT	WB	004	004	5/23/03	14:02	15:15	1.853M	21.3C	16.3C	68.4	29.30IN
2031	REES1432.030	52411432.DAT	BZ	003	003	5/23/03	14:15	15:16	1.853M	16.8C	15.1C	83.9	29.29IN
0299	48451432.030	83561432.DAT	JM	005	005	5/23/03	14:21	15:16	1.853M	20.1C	17.5C	66.5	29.36IN
2028	31681432.030	83791432.DAT	TM	006	006	5/23/03	14:03	15:09	1.853M	19.0C	16.2C	72.2	29.25IN

Receiver JSIN 001 occupied station RV 95 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2028	POINT NCGS 1965	31681432.030	2037	TEAK	TEAK1432.030	5/23/03	14:03	15:09	
2028	POINT NCGS 1965	31681432.030	2010	CRAMER	CRAM1432.030	5/23/03	14:18	15:09	
2031	REESE	REES1432.030	2028	POINT NCGS 1965	31681432.030	5/23/03	14:15	15:09	
0299	WYLIE AZ MK	48451432.030	2031	REESE	REES1432.030	5/23/03	14:21	15:16	

DAY 143 GPS WEEK 1219 FRIDAY 5/23/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2024	MADO1433.030	46201433.DAT	JJ	001	001	5/23/03	15:57	16:46	1.853M	19.7C	16.1C	66.4	29.34IN
2034	SALU1433.030	49141433.DAT	MS	002	002	5/23/03	15:43	16:46	1.853M	15.0C	17.5C	63.6	29.29IN
2004	BELM1433.030	52411433.DAT	BZ	003	003	5/23/03	15:42	16:47	1.853M	19.7C	16.2C	72.5	29.29IN
2017	GLOV1433.030	83521433.DAT	WB	004	004	5/23/03	15:33	16:46	1.853M	19.4C	14.7C	65.0	29.24IN
0239	08171433.030	83561433.DAT	JM	005	005	5/23/03	15:55	16:47	1.853M	21.3C	17.9C	68.0	29.35IN
2010	CRAM1433.030	83791433.DAT	TM	006	006	5/23/03	15:39	16:41	1.853M	20.0C	15.7C	69.5	29.23IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2010	CRAMER	CRAM1433.030	2017	GLOVER	GLOV1433.030	5/23/03	15:39	16:41
2010	CRAMER	CRAM1433.030	2034	SALUDA	SALU1433.030	5/23/03	15:43	16:41
2010	CRAMER	CRAM1433.030	2004	BELMONT	BELM1433.030	5/23/03	15:42	16:41
2004	BELMONT	BELM1433.030	2024	MADORA	MADO1433.030	5/23/03	15:57	16:46
2004	BELMONT	BELM1433.030	0239	RV 95	08171433.030	5/23/03	15:55	16:47

DAY 143 GPS WEEK 1219 FRIDAY 5/23/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2040	WIND1434.030	46201434.DAT	JJ	001	001	5/23/03	17:19	18:15	1.853M	19.0C	15.7C	68.6	29.26IN
1025	DOOL1434.030	49141434.DAT	MS	002	002	5/23/03	17:14	18:15	1.853M	15.4C	17.9C	63.7	29.24IN
0713	25941434.030	52411434.DAT	BZ	003	003	5/23/03	17:14	18:17	1.853M	20.7C	17.2C	72.1	29.24IN
0620	30951434.030	83521434.DAT	WB	004	004	5/23/03	17:07	18:14	1.853M	20.5C	15.1C	67.0	29.20IN
2024	MADO1434.030	83561434.DAT	JM	005	005	5/23/03	17:21	18:17	1.853M	23.9C	18.0C	55.9	29.30IN
1026	REDL1434.030	83791434.DAT	TM	006	006	5/23/03	17:32	18:11	1.853M	20.2C	16.6C	61.5	29.16IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1026	REDLAIR	REDL1434.030	1025	DOOLEY	DOOL1434.030	5/23/03	17:32	18:11
0620	GROVES NCGS 1964	30951434.030	1026	REDLAIR	REDL1434.030	5/23/03	17:32	18:11
1026	REDLAIR	REDL1434.030	2024	MADORA	MADO1434.030	5/23/03	17:32	18:11
2024	MADORA	MADO1434.030	2040	WINDERMERE	WIND1434.030	5/23/03	17:21	18:15
2024	MADORA	MADO1434.030	0713	RHYNE	25941434.030	5/23/03	17:21	18:17

DAY 143 GPS WEEK 1219 FRIDAY 5/23/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2005	CATA1435.030	46201435.DAT	JJ	001	001	5/23/03	18:43	19:46	1.853M	20.8C	16.2C	66.2	29.24IN
1021	DALL1435.030	49141435.DAT	MS	002	002	5/23/03	18:39	19:45	1.853M	12.5C	16.5C	54.1	29.21IN
2040	WIND1435.030	52411435.DAT	BZ	003	003	5/23/03	18:52	19:46	1.853M	20.8C	17.2C	71.5	29.23IN
1026	REDL1435.030	83521435.DAT	WB	004	004	5/23/03	18:38	19:45	1.853M	20.9C	15.4C	66.0	29.30IN
0713	25941435.030	83561435.DAT	JM	005	005	5/23/03	18:52	19:46	1.853M	23.9C	17.6C	59.2	29.25IN
1022	PARS1435.030	83791435.DAT	TM	006	006	5/23/03	18:47	19:41	1.853M	21.9C	17.5C	68.9	29.23IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1021	DALLAS	DALL1435.030	1022	PARSON	PARS1435.030	5/23/03	18:47	19:41
1022	PARSON	PARS1435.030	2040	WINDERMERE	WIND1435.030	5/23/03	18:52	19:41
1026	REDLAIR	REDL1435.030	1021	DALLAS	DALL1435.030	5/23/03	18:39	19:45
2040	WINDERMERE	WIND1435.030	0713	RHYNE	25941435.030	5/23/03	18:52	19:46
2040	WINDERMERE	WIND1435.030	2005	CATAWBA	CATA1435.030	5/23/03	18:52	19:46

DAY 144 GPS WEEK 1219 SATURDAY 5/24/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0093	48011440.030	46201440.DAT	JJ	001	001	5/24/03	11:28	12:17	1.853M	20.0C	14.9C	66.1	29.16IN
2033	RUTL1440.030	49141440.DAT	MS	002	002	5/24/03	11:18	12:16	1.853M	14.6C	15.7C	83.2	29.26IN
1022	PARS1440.030	83521440.DAT	WB	004	004	5/24/03	11:20	12:18	1.853M	19.4C	16.4C	67.8	29.23IN
2005	CATA1440.030	83561440.DAT	JM	005	005	5/24/03	11:24	12:16	1.853M	18.5C	15.5C	77.0	29.24IN
2018	HINE1440.030	83791440.DAT	TM	006	006	5/24/03	11:27	12:08	1.853M	18.3C	15.9C	75.2	29.20IN

Receiver JSIN 003 observed station CARLSON this session, data not used. CARLSON is not suitable for GPS observations. Dropped from network.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
0093	FROGLEVEL	48011440.030	2018	HINES	HINE1440.030	5/24/03	11:28	12:08
1022	PARSON	PARS1440.030	2033	RUTLEDGE	RUTL1440.030	5/24/03	11:20	12:16
2033	RUTLEDGE	RUTL1440.030	2005	CATAWBA	CATA1440.030	5/24/03	11:25	12:16
2005	CATAWBA	CATA1440.030	0093	FROGLEVEL	48011440.030	5/24/03	11:28	12:16

DAY 144 GPS WEEK 1219 SATURDAY 5/24/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2018	HINE1441.030	46201441.DAT	JJ	001	001	5/24/03	12:42	13:47	1.853M	21.1C	15.6C	60.9	29.20IN
0301	36561441.030	49141441.DAT	MS	002	002	5/24/03	12:52	13:45	1.853M	15.1C	16.5C	77.9	29.05IN
2015	GASL1441.030	52411441.DAT	BZ	003	003	5/24/03	12:42	13:46	1.853M	17.8C	16.3C	86.6	29.14IN
1014	SNAK1441.030	83521441.DAT	WB	004	004	5/24/03	12:43	13:46	1.853M	20.1C	17.0C	67.1	29.20IN
2033	RUTL1441.030	83561441.DAT	JM	005	005	5/24/03	12:50	13:46	1.853M	22.8C	19.0C	68.6	29.26IN
2020	IRON1441.030	83791441.DAT	TM	006	006	5/24/03	12:57	13:45	1.853M	19.7C	16.1C	71.0	29.10IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0301	ALEXIS RM 2	36561441.030	2020	IRON	IRON1441.030	5/24/03	12:57	13:45	
2015	GASLIN	GASL1441.030	0301	ALEXIS RM 2	36561441.030	5/24/03	12:52	13:45	
2033	RUTLEDGE	RUTL1441.030	2018	HINES	HINE1441.030	5/24/03	12:50	13:46	
2015	GASLIN	GASL1441.030	1014	SNAKE	SNAK1441.030	5/24/03	12:43	13:46	
2018	HINES	HINE1441.030	2015	GASLIN	GASL1441.030	5/24/03	12:42	13:46	

DAY 144 GPS WEEK 1219 SATURDAY 5/24/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1014	SNAK1442.030	46201442.DAT	JJ	001	001	5/24/03	14:15	15:17	1.853M	23.3C	16.6C	58.0	29.17IN
2020	IRON1442.030	49141442.DAT	MS	002	002	5/24/03	14:08	15:15	1.853M	15.6C	17.5C	72.5	29.10IN
1013	HOYL1442.030	52411442.DAT	BZ	003	003	5/24/03	14:07	15:16	1.853M	18.3C	16.4C	82.2	29.18IN
1021	DALL1442.030	83521442.DAT	WB	004	004	5/24/03	14:04	15:16	1.853M	20.4C	15.6C	63.0	29.16IN
1022	PARS1442.030	83561442.DAT	JM	005	005	5/24/03	14:22	15:16	1.853M	20.0C	19.5C	66.9	29.23IN
0673	48251442.030	83791442.DAT	TM	006	006	5/24/03	14:22	15:19	1.853M	22.5C	18.5C	66.2	29.13IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2020	IRON	IRON1442.030	0673	NORTH	48251442.030	5/24/03	14:22	15:15
2020	IRON	IRON1442.030	1013	HOYLE	HOYL1442.030	5/24/03	14:08	15:15
1013	HOYLE	HOYL1442.030	1021	DALLAS	DALL1442.030	5/24/03	14:07	15:16
1014	SNAKE	SNAK1442.030	1022	PARSON	PARS1442.030	5/24/03	14:22	15:16
1013	HOYLE	HOYL1442.030	1014	SNAKE	SNAK1442.030	5/24/03	14:15	15:16

DAY 144 GPS WEEK 1219 SATURDAY 5/24/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2012	DELM1443.030	46201443.DAT	JJ	001	001	5/24/03	16:03	17:01	1.853M	21.2C	17.7C	58.4	28.93IN
2002	BAXT1443.030	49141443.DAT	MS	002	002	5/24/03	15:54	17:00	1.853M	17.3C	19.7C	64.3	28.92IN
0637	48331443.030	52411443.DAT	BZ	003	003	5/24/03	16:00	17:02	1.853M	21.1C	18.2C	67.0	28.95IN
2003	BEAM1443.030	83521443.DAT	WB	004	004	5/24/03	15:56	17:01	1.853M	27.0C	19.0C	63.8	29.30IN
2014	48001443.030	83561443.DAT	JM	005	005	5/24/03	16:03	17:02	1.853M	22.3C	20.3C	41.7	29.00IN
0525	47901443.030	83791443.DAT	TM	006	006	5/24/03	15:58	16:59	1.853M	23.0C	17.0C	57.1	28.98IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2014	FISHCAMP AZ MK	48001443.030	0525	BANK	47901443.030	5/24/03	16:03	16:59	
0637	ROBINSON	48331443.030	2002	BAXTER	BAXT1443.030	5/24/03	16:01	17:00	
2002	BAXTER	BAXT1443.030	2012	DELMAC	DELM1443.030	5/24/03	16:03	17:00	
2012	DELMAC	DELM1443.030	2014	FISHCAMP AZ MK	48001443.030	5/24/03	16:03	17:01	
2003	BEAM	BEAM1443.030	0637	ROBINSON	48331443.030	5/24/03	16:00	17:01	

DAY 144 GPS WEEK 1219 SATURDAY 5/24/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2014	48001444.030	49141444.DAT	MS	002	002	5/24/03	17:20	18:30	1.853M	17.2C	21.1C	43.7	29.01IN
2025	14801444.030	52411444.DAT	BZ	003	003	5/24/03	17:37	18:31	1.853M	21.6C	17.5C	66.0	28.90IN
0792	48431444.030	83521444.DAT	WB	004	004	5/24/03	17:32	18:30	1.853M	28.5C	20.8C	48.4	28.95IN
2013	DUKE1444.030	83561444.DAT	JM	005	005	5/24/03	17:42	18:30	1.853M	30.1C	19.7C	49.3	28.98IN
1005	SUNN1444.030	83791444.DAT	TM	006	006	5/24/03	17:25	18:27	1.853M	24.5C	17.0C	53.5	29.05IN

Receiver JSIN 001 observed station WARLICK this session, data not used. WARLICK was determined unsuitable for GPS observations. It was replaced by WARLICK AZ MK which was observed on days 175 & 176.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2013	DUKECO	DUKE1444.030	1005	SUNNYSIDE	SUNN1444.030	5/24/03	17:42	18:27
2014	FISHCAMP AZ MK	48001444.030	0792	WHITERSPOONS	48431444.030	5/24/03	17:32	18:30
2013	DUKECO	DUKE1444.030	2025	N 251	14801444.030	5/24/03	17:42	18:30
0792	WHITERSPOONS	48431444.030	2013	DUKECO	DUKE1444.030	5/24/03	17:42	18:30

DAY 144 GPS WEEK 1219 SATURDAY 5/24/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0660	07801445.030	46201445.DAT	JJ	001	001	5/24/03	18:56	19:55	1.853M	23.0C	17.3C	56.5	28.94IN
1005	SUNN1445.030	49141445.DAT	MS	002	002	5/24/03	18:52	19:55	1.853M	12.2C	18.2C	45.4	29.07IN
1033	PINN1445.030	52411445.DAT	BZ	003	003	5/24/03	18:54	19:56	1.853M	26.7C	20.1C	53.3	28.92IN
2025	14801445.030	83521445.DAT	WB	004	004	5/24/03	18:57	19:55	1.853M	27.3C	19.7C	50.1	28.95IN
2027	ORCH1445.030	83561445.DAT	JM	005	005	5/24/03	19:08	19:57	1.853M	26.7C	19.1C	48.1	29.03IN
2035	50871445.030	83791445.DAT	TM	006	006	5/24/03	18:59	19:53	1.853M	23.3C	17.4C	62.0	28.98IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2035	SHEAR	50871445.030	2027	ORCHARD	ORCH1445.030	5/24/03	19:08	19:53
2035	SHEAR	50871445.030	1033	PINNACLE	PINN1445.030	5/24/03	19:00	19:53
2025	N 251	14801445.030	2035	SHEAR	50871445.030	5/24/03	19:00	19:53
1005	SUNNYSIDE	SUNN1445.030	0660	M 40	07801445.030	5/24/03	18:56	19:55

DAY 145 GPS WEEK 1220 SUNDAY 5/25/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2030	RALP1450.030	46201450.DAT	JJ	001	001	5/25/03	11:08	12:17	1.853M	23.0C	19.6C	70.3	29.15IN
2027	ORCH1450.030	49141450.DAT	MS	002	002	5/25/03	11:04	12:16	1.853M	17.4C	19.9C	68.3	29.02IN
2011	CRAW1450.030	52411450.DAT	BZ	003	003	5/25/03	11:16	12:17	1.853M	18.9C	18.4C	97.3	29.13IN
1033	PINN1450.030	83521450.DAT	WB	004	004	5/25/03	10:52	12:16	1.853M	20.6C	17.7C	80.1	28.93IN
0594	43801450.030	83561450.DAT	JM	005	005	5/25/03	11:31	12:15	1.853M	23.3C	19.5C	81.9	29.07IN
0679	48461450.030	83791450.DAT	TM	006	006	5/25/03	11:12	12:10	1.853M	20.4C	18.2C	84.1	29.04IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1033	PINNACLE	PINN1450.030	0679	YORK	48461450.030	5/25/03	11:12	12:10
0679	YORK	48461450.030	0594	FURGUSSON	43801450.030	5/25/03	11:31	12:10
0594	FURGUSSON	43801450.030	2011	CRAWFORD	CRAW1450.030	5/25/03	11:31	12:15
2027	ORCHARD	ORCH1450.030	2030	RALPH	RALP1450.030	5/25/03	11:09	12:16
2030	RALPH	RALP1450.030	1033	PINNACLE	PINN1450.030	5/25/03	11:09	12:16

DAY 145 GPS WEEK 1220 SUNDAY 5/25/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0111	36031451.030	46201451.DAT	JJ	001	001	5/25/03	12:47	13:47	1.853M	21.5C	18.5C	74.4	29.11IN
2006	CHAN1451.030	49141451.DAT	MS	002	002	5/25/03	12:37	13:46	1.853M	17.1C	18.8C	72.0	29.12IN
0172	48231451.030	52411451.DAT	BZ	003	003	5/25/03	12:44	13:46	1.853M	20.1C	19.6C	96.1	29.24IN
0133	15381451.030	83521451.DAT	WB	004	004	5/25/03	12:46	13:45	3.153M	20.3C	17.5C	77.3	29.01IN
1035	HAVE1451.030	83561451.DAT	JM	005	005	5/25/03	13:03	13:45	1.853M	21.9C	17.8C	80.1	29.17IN
2011	CRAW1451.030	83791451.DAT	TM	006	006	5/25/03	12:47	13:44	1.853M	24.8C	19.3C	68.5	29.15IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0133	J 222 1982	15381451.030	2011	CRAWFORD	CRAW1451.030	5/25/03	12:47	13:44	
1035	HAVEN	HAVE1451.030	0172	NEARLY	48231451.030	5/25/03	13:03	13:45	
0111	GASPORT	36031451.030	1035	HAVEN	HAVE1451.030	5/25/03	13:03	13:45	
0133	J 222 1982	15381451.030	2006	CHANTILLY	CHAN1451.030	5/25/03	12:46	13:45	
1035	HAVEN	HAVE1451.030	0133	J 222 1982	15381451.030	5/25/03	13:03	13:45	

DAY 145 GPS WEEK 1220 SUNDAY 5/25/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0148	15351452.030	46201452.DAT	JJ	001	001	5/25/03	14:11	15:07	1.853M	23.2C	19.9C	73.5	29.11IN
2006	CHAN1452.030	52411452.DAT	BZ	003	003	5/25/03	14:12	15:07	1.853M	21.4C	18.7C	79.5	29.12IN
2009	31991452.030	83521452.DAT	WB	004	004	5/25/03	14:06	15:05	1.853M	21.5C	18.2C	75.0	29.15IN
2034	SALU1452.030	83561452.DAT	JM	005	005	5/25/03	14:19	15:05	1.853M	22.1C	20.8C	73.5	29.19IN
2030	RALP1452.030	83791452.DAT	TM	006	006	5/25/03	14:11	15:00	1.853M	24.5C	20.6C	62.3	29.16IN

Receiver JSIN 002 observed Station T 251 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2006	CHANTILLY	CHAN1452.030	2030	RALPH	RALP1452.030	5/25/03	14:12	15:00	
0148	L 222	15351452.030	2034	SALUDA	SALU1452.030	5/25/03	14:19	15:05	
2009	COLE NCGS 1964	31991452.030	2006	CHANTILLY	CHAN1452.030	5/25/03	14:12	15:05	
2006	CHANTILLY	CHAN1452.030	0148	L 222	15351452.030	5/25/03	14:12	15:07	

DAY 145 GPS WEEK 1220 SUNDAY 5/25/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901453.030	46201453.DAT	JJ	001	001	5/25/03	15:24	16:27	1.853M	23.2C	19.8C	69.4	29.18IN
0660	07801453.030	49141453.DAT	MS	002	002	5/25/03	15:29	16:26	1.853M	17.8C	22.2C	43.9	29.03IN
2009	31991453.030	52411453.DAT	BZ	003	003	5/25/03	15:23	16:26	1.853M	24.2C	20.2C	70.1	29.12IN
0723	07871453.030	83521453.DAT	WB	004	004	5/25/03	15:32	16:25	1.853M	23.3C	20.8C	69.2	29.06IN
2027	ORCH1453.030	83791453.DAT	TM	006	006	5/25/03	15:24	16:19	1.853M	26.9C	20.9C	54.7	29.04IN
2016	GAST1450.030			008	008	5/25/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 005 observed station T 251 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2027	ORCHARD	ORCH1453.030	2009	COLE NCGS 1964	31991453.030	5/25/03	15:24	16:19	
2027	ORCHARD	ORCH1453.030	0660	M 40	07801453.030	5/25/03	15:29	16:19	
2027	ORCHARD	ORCH1453.030	0723	RV 76	07871453.030	5/25/03	15:32	16:19	
0723	RV 76	07871453.030	0554	COMB	14901453.030	5/25/03	15:32	16:25	
2016	GASTON CORS ARP	GAST1450.030	0554	COMB	14901453.030	5/25/03	15:24	16:27	

DAY 145 GPS WEEK 1220 SUNDAY 5/25/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1011	PUET1454.030	46201454.DAT	JJ	001	001	5/25/03	16:49	17:52	1.853M	24.9C	19.8C	64.2	29.02IN
2001	ANTH1454.030	49141454.DAT	MS	002	002	5/25/03	16:52	17:50	1.853M	20.3C	26.2C	30.2	29.06IN
0723	07871454.030	52411454.DAT	BZ	003	003	5/25/03	16:52	17:51	1.853M	29.2C	20.6C	43.4	29.02IN
2021	KINL1454.030	83521454.DAT	WB	004	004	5/25/03	16:51	17:50	1.853M	24.0C	21.2C	73.1	29.13IN
2019	HUBB1454.030	83561454.DAT	JM	005	005	5/25/03	16:54	17:51	1.853M	34.4C	22.9C	36.5	28.99IN
1005	SUNN1454.030	83791454.DAT	TM	006	006	5/25/03	16:51	17:47	1.853M	27.5C	18.8C	49.7	29.01IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2021	KINLEY	KINL1454.030	1005	SUNNYSIDE	SUNN1454.030	5/25/03	16:51	17:47
2021	KINLEY	KINL1454.030	2001	ANTHONY	ANTH1454.030	5/25/03	16:52	17:50
1011	PUETTS	PUET1454.030	2021	KINLEY	KINL1454.030	5/25/03	16:51	17:50
2019	HUB	HUBB1454.030	1011	PUETTS	PUET1454.030	5/25/03	16:54	17:51
0723	RV 76	07871454.030	2019	HUB	HUBB1454.030	5/25/03	16:54	17:51

DAY 145 GPS WEEK 1220 SUNDAY 5/25/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2007	CHAP1455.030	46201455.DAT	JJ	001	001	5/25/03	18:10	19:16	1.853M	25.0C	18.9C	55.5	29.00IN
2003	BEAM1455.030	49141455.DAT	MS	002	002	5/25/03	18:09	19:16	1.853M	15.9C	21.0C	45.1	28.97IN
0792	48431455.030	52411455.DAT	BZ	003	003	5/25/03	18:23	19:17	1.853M	27.7C	20.6C	51.7	28.88IN
2036	SHOA1455.030	83521455.DAT	WB	004	004	5/25/03	18:05	18:52	1.853M	24.2C	21.3C	73.5	29.18IN
2001	ANTH1455.030	83561455.DAT	JM	005	005	5/25/03	18:12	19:14	1.853M	32.1C	20.6C	36.7	28.97IN
0525	47901455.030	83791455.DAT	TM	006	006	5/25/03	18:13	19:14	1.853M	31.1C	21.5C	35.3	28.88IN

BASELINES USED

FROM STATION		TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2007	CHAPEL	CHAP1455.030	2036	SHOALS	SHOA1455.030	5/25/03	18:10	18:52
2036	SHOALS	SHOA1455.030	2003	BEAM	BEAM1455.030	5/25/03	18:10	18:52
2001	ANTHONY	ANTH1455.030	0792	WHITERSPOONS	48431455.030	5/25/03	18:23	19:14
2001	ANTHONY	ANTH1455.030	2007	CHAPEL	CHAP1455.030	5/25/03	18:12	19:14
2003	BEAM	BEAM1455.030	0525	BANK	47901455.030	5/25/03	18:13	19:14

DAY 146 GPS WEEK 1220 MONDAY 5/26/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1012	FRID1460.030	46201460.DAT	JJ	001	001	5/26/03	11:19	12:16	1.853M	19.8C	16.1C	75.0	29.22IN
2007	CHAP1460.030	49141460.DAT	MS	002	002	5/26/03	11:14	12:15	1.853M	13.5C	17.2C	56.9	29.00IN
1011	PUET1460.030	52411460.DAT	BZ	003	003	5/26/03	11:11	12:17	1.853M	19.7C	17.8C	83.6	29.00IN
0673	48251460.030	83521460.DAT	WB	004	004	5/26/03	11:00	12:17	1.853M	20.3C	17.1C	71.0	29.05IN
2032	REPE1460.030	83561460.DAT	JM	005	005	5/26/03	11:19	12:15	1.853M	20.6C	17.7C	68.8	29.04IN
2021	KINL1460.030	83791460.DAT	TM	006	006	5/26/03	11:09	12:15	1.853M	21.1C	18.2C	77.0	28.96IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2032	REPENTER	REPE1460.030	2007	CHAPEL	CHAP1460.030	5/26/03	11:19	12:15
2032	REPENTER	REPE1460.030	2021	KINLEY	KINL1460.030	5/26/03	11:19	12:15
0673	NORTH	48251460.030	2032	REPENTER	REPE1460.030	5/26/03	11:19	12:15
1011	PUETTS	PUET1460.030	1012	FRIDAY	FRID1460.030	5/26/03	11:20	12:16
1012	FRIDAY	FRID1460.030	0673	NORTH	48251460.030	5/26/03	11:20	12:16

DAY 146 GPS WEEK 1220 MONDAY 5/26/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901461.030	46201461.DAT	JJ	001	001	5/26/03	12:42	13:51	1.853M	23.6C	18.1C	69.6	29.15IN
2019	HUBB1461.030	49141461.DAT	MS	002	002	5/26/03	12:42	13:50	1.853M	12.3C	16.5C	46.5	29.03IN
1020	CARR1461.030	52411461.DAT	BZ	003	003	5/26/03	12:59	13:51	1.853M	28.7C	20.7C	45.2	29.09IN
1013	HOYL1461.030	83521461.DAT	WB	004	004	5/26/03	12:49	13:51	1.853M	23.4C	17.0C	55.1	29.13IN
1012	FRID1461.030	83561461.DAT	JM	005	005	5/26/03	12:49	13:51	1.853M	22.7C	18.3C	70.7	29.22IN
0604	14951461.030	83791461.DAT	TM	006	006	5/26/03	12:40	13:47	1.853M	24.7C	18.9C	50.5	29.17IN
2016	GAST1460.030			008	008	5/26/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2019	HUB	HUBB1461.030	0604	GAS 5	14951461.030	5/26/03	13:15	13:47	
1012	FRIDAY	FRID1461.030	0604	GAS 5	14951461.030	5/26/03	12:49	13:47	
2016	GASTON CORS ARP	GAST1460.030	0604	GAS 5	14951461.030	5/26/03	12:40	13:47	
0604	GAS 5	14951461.030	0554	COMB	14901461.030	5/26/03	12:42	13:47	
1012	FRIDAY	FRID1461.030	1013	HOYLE	HOYL1461.030	5/26/03	12:49	13:51	
1012	FRIDAY	FRID1461.030	1020	CARR	CARR1461.030	5/26/03	12:59	13:51	
2016	GASTON CORS ARP	GAST1460.030	1020	CARR	CARR1461.030	5/26/03	13:15	13:51	
2016	GASTON CORS ARP	GAST1460.030	0554	COMB	14901461.030	5/26/03	12:42	13:51	

DAY 146 GPS WEEK 1220 MONDAY 5/26/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901462.030	49141462.DAT	MS	002	002	5/26/03	14:14	15:15	1.853M	17.0C	20.8C	49.9	29.19IN
1021	DALL1463.030	83521463.DAT	WB	004	004	5/26/03	14:07	15:15	1.853M	25.8C	19.2C	49.8	29.11IN
1020	CARR1462.030	83561462.DAT	JM	005	005	5/26/03	14:17	15:15	1.853M	27.4C	18.9C	50.7	29.11IN
0263	31491462.030	83791462.DAT	TM	006	006	5/26/03	14:13	15:10	1.853M	27.8C	19.1C	50.2	29.08IN
2016	GAST1460.030			008	008	5/26/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 004 miss-started a session causing the following session identifiers in file names to be off by one.

Receiver JSIN 001 occupied station GROVES NCGS 1964 this session, data not used.

Receiver JSIN 003 occupied station DOOLEY this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0554	COMB	14901462.030	0263	TANK NCGS 1965	31491462.030	5/26/03	14:14	15:10	
2016	GASTON CORS ARP	GAST1460.030	1020	CARR	CARR1462.030	5/26/03	14:17	15:15	
2016	GASTON CORS ARP	GAST1460.030	0554	COMB	14901462.030	5/26/03	14:14	15:15	
1020	CARR	CARR1462.030	1021	DALLAS	DALL1463.030	5/26/03	14:17	15:15	

DAY 146 GPS WEEK 1220 MONDAY 5/26/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2004	BELM1463.030	46201463.DAT	JJ	001	001	5/26/03	15:29	16:47	1.853M	23.0C	17.8C	59.3	29.23IN
0760	14871463.030	49141463.DAT	MS	002	002	5/26/03	15:38	16:45	1.853M	16.4C	21.3C	41.5	29.12IN
2034	SALU1463.030	52411463.DAT	BZ	003	003	5/26/03	15:45	16:46	1.853M	24.3C	18.7C	55.7	29.18IN
0620	30951464.030	83521464.DAT	WB	004	004	5/26/03	15:38	16:44	1.853M	24.3C	18.1C	52.7	29.15IN
0263	31491463.030	83561463.DAT	JM	005	005	5/26/03	15:49	16:44	1.853M	27.4C	19.5C	49.3	29.08IN
0111	36031463.030	83791463.DAT	TM	006	006	5/26/03	15:45	16:47	1.853M	28.1C	19.7C	45.0	29.11IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0760	T 251	14871463.030	0263	TANK NCGS 1965	31491463.030	5/26/03	15:49	16:44	
0263	TANK NCGS 1965	31491463.030	2034	SALUDA	SALU1463.030	5/26/03	15:49	16:44	
0620	GROVES NCGS 1964	30951464.030	2004	BELMONT	BELM1463.030	5/26/03	15:38	16:44	
2034	SALUDA	SALU1463.030	0620	GROVES NCGS 1964	30951464.030	5/26/03	15:45	16:44	
2034	SALUDA	SALU1463.030	0111	GASPORT	36031463.030	5/26/03	15:45	16:46	

DAY 146 GPS WEEK 1220 MONDAY 5/26/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2037	TEAK1464.030	46201464.DAT	JJ	001	001	5/26/03	17:11	18:16	1.853M	25.8C	21.2C	66.5	29.22IN
0111	36031464.030	49141464.DAT	MS	002	002	5/26/03	17:10	18:15	1.853M	06.9C	17.3C	26.2	29.13IN
2039	WILL1464.030	52411464.DAT	BZ	003	003	5/26/03	17:12	18:15	1.853M	26.5C	19.3C	49.7	29.20IN
2017	GLOV1465.030	83521465.DAT	WB	004	004	5/26/03	17:10	18:15	1.853M	28.7C	21.7C	48.5	29.18IN
0172	48231464.030	83561464.DAT	JM	005	005	5/26/03	17:20	18:15	1.853M	31.1C	20.9C	42.9	29.23IN
0299	48451464.030	83791464.DAT	TM	006	006	5/26/03	17:17	18:12	1.853M	27.2C	19.1C	58.6	29.29IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2039	WILLOW	WILL1464.030	0299	WYLIE AZ MK	48451464.030	5/26/03	17:17	18:12
2037	TEAK	TEAK1464.030	0299	WYLIE AZ MK	48451464.030	5/26/03	17:17	18:12
2017	GLOVER	GLOV1465.030	2037	TEAK	TEAK1464.030	5/26/03	17:11	18:15
2039	WILLOW	WILL1464.030	0172	NEARLY	48231464.030	5/26/03	17:20	18:15
0111	GASPORT	36031464.030	2017	GLOVER	GLOV1465.030	5/26/03	17:10	18:15

DAY 146 GPS WEEK 1220 MONDAY 5/26/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2010	CRAM1465.030	49141465.DAT	MS	002	002	5/26/03	18:35	19:45	1.853M	14.8C	18.6C	52.6	29.15IN
2031	REES1465.030	52411465.DAT	BZ	003	003	5/26/03	18:40	19:45	1.853M	27.4C	18.5C	38.2	29.18IN
2037	TEAK1466.030	83521466.DAT	WB	004	004	5/26/03	18:37	19:46	1.853M	26.1C	19.3C	53.2	29.19IN
0299	48451465.030	83561465.DAT	JM	005	005	5/26/03	18:52	19:45	1.853M	27.7C	20.9C	48.6	29.25IN
2028	31681465.030	83791465.DAT	TM	006	006	5/26/03	18:34	19:44	1.853M	28.2C	20.5C	43.5	29.19IN

Receiver JSIN 001 occupied station RV 95 this session, data not used.

BASELINES USED

FROM STATION			TO STATION			DATE	START	END
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE			
2028	POINT NCGS 1965	31681465.030	2010	CRAMER	CRAM1465.030	5/26/03	18:35	19:44
2031	REESE	REES1465.030	2028	POINT NCGS 1965	31681465.030	5/26/03	18:40	19:44
2028	POINT NCGS 1965	31681465.030	2037	TEAK	TEAK1466.030	5/26/03	18:37	19:44
0299	WYLIE AZ MK	48451465.030	2031	REESE	REES1465.030	5/26/03	18:52	19:45

DAY 147 GPS WEEK 1220 TUESDAY 5/27/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2024	MADO1470.030	46201470.DAT	JJ	001	001	5/27/03	11:28	12:16	1.853M	18.8C	15.2C	65.8	29.28IN
2034	SALU1470.030	49141470.DAT	MS	002	002	5/27/03	11:12	12:15	1.853M	13.0C	15.8C	64.6	29.21IN
2004	BELM1470.030	52411470.DAT	BZ	003	003	5/27/03	11:15	12:15	1.853M	17.6C	16.0C	85.6	29.25IN
2017	GLOV1470.030	83521470.DAT	WB	004	004	5/27/03	11:21	12:16	1.853M	20.9C	16.0C	58.5	29.13IN
0239	08171470.030	83561470.DAT	JM	005	005	5/27/03	11:21	12:15	1.853M	18.6C	15.6C	75.6	29.30IN
2010	CRAM1470.030	83791470.DAT	TM	006	006	5/27/03	11:21	12:10	1.853M	16.5C	13.5C	70.4	29.20IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2010	CRAMER	CRAM1470.030	2017	GLOVER	GLOV1470.030	5/27/03	11:21	12:10
2010	CRAMER	CRAM1470.030	2034	SALUDA	SALU1470.030	5/27/03	11:21	12:10
2010	CRAMER	CRAM1470.030	2004	BELMONT	BELM1470.030	5/27/03	11:21	12:10
2004	BELMONT	BELM1470.030	0239	RV 95	08171470.030	5/27/03	11:21	12:15
2004	BELMONT	BELM1470.030	2024	MADORA	MADO1470.030	5/27/03	11:29	12:15

DAY 147 GPS WEEK 1220 TUESDAY 5/27/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2040	WIND1471.030	46201471.DAT	JJ	001	001	5/27/03	12:29	13:46	1.853M	17.0C	14.1C	67.6	29.24IN
1025	DOOL1471.030	49141471.DAT	MS	002	002	5/27/03	12:45	13:46	1.853M	13.9C	16.9C	60.0	29.20IN
0713	25941471.030	52411471.DAT	BZ	003	003	5/27/03	12:42	13:45	1.853M	17.2C	15.6C	85.7	29.25IN
0620	30951471.030	83521471.DAT	WB	004	004	5/27/03	12:46	13:44	1.853M	21.3C	16.7C	58.1	29.18IN
2024	MADO1471.030	83561471.DAT	JM	005	005	5/27/03	12:49	13:45	1.853M	17.5C	16.3C	78.3	29.30IN
1026	REDL1471.030	83791471.DAT	TM	006	006	5/27/03	12:44	13:41	1.853M	16.5C	14.0C	74.8	29.15IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1026	REDLAIR	REDL1471.030	1025	DOOLEY	DOOL1471.030	5/27/03	12:45	13:41
0620	GROVES NCGS 1964	30951471.030	1026	REDLAIR	REDL1471.030	5/27/03	12:46	13:41
1026	REDLAIR	REDL1471.030	2024	MADORA	MADO1471.030	5/27/03	12:50	13:41
2024	MADORA	MADO1471.030	0713	RHYNE	25941471.030	5/27/03	12:50	13:45
2024	MADORA	MADO1471.030	2040	WINDERMERE	WIND1471.030	5/27/03	12:50	13:45

DAY 147 GPS WEEK 1220 TUESDAY 5/27/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2005	CATA1472.030	46201472.DAT	JJ	001	001	5/27/03	14:03	15:17	1.853M	20.4C	16.8C	68.2	29.25IN
1021	DALL1472.030	49141472.DAT	MS	002	002	5/27/03	14:04	15:16	1.853M	12.0C	15.2C	38.6	29.17IN
2040	WIND1472.030	52411472.DAT	BZ	003	003	5/27/03	14:03	15:15	1.853M	20.3C	17.3C	74.5	29.23IN
1026	REDL1472.030	83521472.DAT	WB	004	004	5/27/03	14:04	15:11	1.853M	22.6C	17.5C	60.5	29.15IN
0713	25941472.030	83561472.DAT	JM	005	005	5/27/03	14:20	15:15	1.853M	18.6C	15.4C	70.3	29.26IN
1022	PARS1472.030	83791472.DAT	TM	006	006	5/27/03	14:08	15:14	1.853M	17.6C	14.9C	70.5	29.24IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1026	REDLAIR	REDL1472.030	1021	DALLAS	DALL1472.030	5/27/03	14:04	15:11
1021	DALLAS	DALL1472.030	1022	PARSON	PARS1472.030	5/27/03	14:08	15:14
1022	PARSON	PARS1472.030	2040	WINDERMERE	WIND1472.030	5/27/03	14:08	15:14
2040	WINDERMERE	WIND1472.030	0713	RHYNE	25941472.030	5/27/03	14:20	15:15
2040	WINDERMERE	WIND1472.030	2005	CATAWBA	CATA1472.030	5/27/03	14:04	15:15

DAY 147 GPS WEEK 1220 TUESDAY 5/27/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0093	48011473.030	46201473.DAT	JJ	001	001	5/27/03	15:43	16:46	1.853M	21.0C	15.2C	63.7	29.17IN
2033	RUTL1473.030	49141473.DAT	MS	002	002	5/27/03	15:35	16:45	1.853M	16.1C	19.0C	61.3	29.31IN
1022	PARS1473.030	83521473.DAT	WB	004	004	5/27/03	15:36	16:45	1.853M	23.3C	18.3C	62.2	29.23IN
2005	CATA1473.030	83561473.DAT	JM	005	005	5/27/03	15:51	16:45	1.853M	21.0C	16.4C	67.2	29.24IN
2018	HINE1473.030	83791473.DAT	TM	006	006	5/27/03	15:39	16:41	1.853M	18.5C	15.4C	74.2	29.21IN

Receiver JSIN 003 occupied station CARLSON this session, data not used. CARLSON is not suitable for GPS observations. Dropped from network.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
0093	FROGLEVEL	48011473.030	2018	HINES	HINE1473.030	5/27/03	15:43	16:41
1022	PARSON	PARS1473.030	2033	RUTLEDGE	RUTL1473.030	5/27/03	15:36	16:45
2033	RUTLEDGE	RUTL1473.030	2005	CATAWBA	CATA1473.030	5/27/03	15:51	16:45
2005	CATAWBA	CATA1473.030	0093	FROGLEVEL	48011473.030	5/27/03	15:51	16:45

DAY 147 GPS WEEK 1220 TUESDAY 5/27/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2018	HINE1474.030	46201474.DAT	JJ	001	001	5/27/03	17:22	18:16	1.853M	22.9C	17.0C	63.9	29.21IN
0301	36561474.030	49141474.DAT	MS	002	002	5/27/03	17:10	18:16	1.853M	14.3C	19.8C	38.5	29.06IN
2015	GASL1474.030	52411474.DAT	BZ	003	003	5/27/03	17:10	18:15	1.853M	24.6C	18.3C	52.8	29.12IN
1014	SNAK1474.030	83521474.DAT	WB	004	004	5/27/03	17:00	18:17	1.853M	25.2C	19.3C	50.9	29.14IN
2033	RUTL1474.030	83561474.DAT	JM	005	005	5/27/03	17:19	18:16	1.853M	20.5C	17.7C	61.4	29.25IN
2020	IRON1474.030	83791474.DAT	TM	006	006	5/27/03	17:09	18:12	1.853M	20.2C	16.8C	65.1	29.10IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0301	ALEXIS RM 2	36561474.030	2020	IRON	IRON1474.030	5/27/03	17:10	18:12	
2015	GASLIN	GASL1474.030	1014	SNAKE	SNAK1474.030	5/27/03	17:10	18:15	
2018	HINES	HINE1474.030	2015	GASLIN	GASL1474.030	5/27/03	17:22	18:15	
2015	GASLIN	GASL1474.030	0301	ALEXIS RM 2	36561474.030	5/27/03	17:10	18:15	
2033	RUTLEDGE	RUTL1474.030	2018	HINES	HINE1474.030	5/27/03	17:22	18:16	

DAY 147 GPS WEEK 1220 TUESDAY 5/27/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1014	SNAK1475.030	46201475.DAT	JJ	001	001	5/27/03	18:35	19:46	1.853M	28.7C	20.0C	45.1	29.15IN
2020	IRON1475.030	49141475.DAT	MS	002	002	5/27/03	18:30	19:45	1.853M	10.4C	17.1C	39.2	29.08IN
1013	HOYL1475.030	52411475.DAT	BZ	003	003	5/27/03	18:36	19:46	1.853M	26.6C	18.8C	49.0	29.13IN
1021	DALL1475.030	83521475.DAT	WB	004	004	5/27/03	18:37	19:45	1.853M	25.4C	18.6C	50.6	29.13IN
1022	PARS1475.030	83561475.DAT	JM	005	005	5/27/03	18:44	19:44	1.853M	27.0C	19.6C	49.9	29.19IN
0673	48251475.030	83791475.DAT	TM	006	006	5/27/03	18:33	19:43	1.853M	25.0C	18.8C	54.4	29.09IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
2020	IRON	IRON1475.030	0673	NORTH	48251475.030	5/27/03	18:33	19:43
1014	SNAKE	SNAK1475.030	1022	PARSON	PARS1475.030	5/27/03	18:45	19:44
1013	HOYLE	HOYL1475.030	1021	DALLAS	DALL1475.030	5/27/03	18:37	19:45
2020	IRON	IRON1475.030	1013	HOYLE	HOYL1475.030	5/27/03	18:36	19:45
1013	HOYLE	HOYL1475.030	1014	SNAKE	SNAK1475.030	5/27/03	18:36	19:46

BEGIN SECONDARY NETWORK OBSERVATIONS

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2015	GASL1480.030	46201480.DAT	JJ	001	001	5/28/03	11:24	12:16	1.853M	17.3C	13.3C	58.0	29.16IN
0093	48011480.030	49141480.DAT	MS	002	002	5/28/03	11:23	12:16	1.853M	14.7C	10.1C	48.2	29.19IN
2022	78301480.030	52411480.DAT	WZ	003	003	5/28/03	11:25	12:21	1.853M	20.4C	15.6C	58.7	29.15IN
0713	25941480.030	83521480.DAT	WB	004	004	5/28/03	11:10	12:19	1.853M	18.1C	14.7C	61.2	29.37IN
1022	PARS1480.030	83561480.DAT	JM	005	005	5/28/03	11:22	12:14	1.853M	12.4C	10.9C	83.3	29.25IN
0673	48251480.030	83791480.DAT	TM	006	006	5/28/03	11:19	12:09	1.853M	17.0C	12.9C	65.9	29.14IN
2016	GAST1480.030			008	008	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN
2008	CHME1480.030			007	007	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2016	GASTON CORS ARP	GAST1480.030	0673	NORTH	48251480.030	5/28/03	11:19	12:09	
0673	NORTH	48251480.030	2015	GASLIN	GASL1480.030	5/28/03	11:25	12:09	
2015	GASLIN	GASL1480.030	1022	PARSON	PARS1480.030	5/28/03	11:25	12:14	
0093	FROGLEVEL	48011480.030	0713	RHYNE	25941480.030	5/28/03	11:23	12:16	
0093	FROGLEVEL	48011480.030	2022	LAKEVIEW	78301480.030	5/28/03	11:26	12:16	
2015	GASLIN	GASL1480.030	0093	FROGLEVEL	48011480.030	5/28/03	11:25	12:16	
2008	CHARLOTTE CORS ARP	CHME1480.030	2022	LAKEVIEW	78301480.030	5/28/03	11:26	12:21	

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0239	08171481.030	46201481.DAT	JJ	001	001	5/28/03	12:50	13:56	1.853M	18.3C	14.7C	63.3	29.35IN
0713	25941481.030	49141481.DAT	MS	002	002	5/28/03	12:51	13:55	1.853M	08.0C	14.0C	43.8	29.30IN
2022	78301481.030	52411481.DAT	WZ	003	003	5/28/03	12:22	13:56	1.853M	20.0C	15.8C	61.5	29.14IN
0299	48451481.030	83521481.DAT	WB	004	004	5/28/03	12:50	13:58	1.853M	20.6C	14.9C	53.5	29.39IN
0499	03161481.030	83561481.DAT	JM	005	005	5/28/03	13:05	13:56	1.853M	21.0C	15.7C	50.5	29.35IN
0133	15381481.030	83791481.DAT	TM	006	006	5/28/03	13:03	13:53	1.853M	27.4C	18.6C	47.9	29.34IN
2008	CHME1480.030			007	007	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0299	WYLIE AZ MK	48451481.030	0133	J 222 1982	15381481.030	5/28/03	13:03	13:53	
0713	RHYNE	25941481.030	0239	RV 95	08171481.030	5/28/03	12:51	13:55	
2008	CHARLOTTE CORS ARP	CHME1480.030	0713	RHYNE	25941481.030	5/28/03	12:51	13:55	
2022	LAKEVIEW	78301481.030	0713	RHYNE	25941481.030	5/28/03	12:51	13:55	
0299	WYLIE AZ MK	48451481.030	0499	PRODUCE	03161481.030	5/28/03	13:05	13:56	
0239	RV 95	08171481.030	0299	WYLIE AZ MK	48451481.030	5/28/03	12:51	13:56	

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0239	08171482.030	46201482.DAT	JJ	001	001	5/28/03	14:10	15:32	1.853M	24.1C	16.9C	24.4	29.30IN
1022	PARS1482.030	49141482.DAT	MS	002	002	5/28/03	14:17	15:30	1.853M	09.4C	15.7C	41.7	29.25IN
0217	22471482.030	52411482.DAT	WZ	003	003	5/28/03	14:46	15:31	1.853M	27.1C	17.0C	36.5	29.23IN
0620	30951482.030	83521482.DAT	WB	004	004	5/28/03	14:19	15:29	1.853M	27.3C	17.5C	33.9	29.20IN
0499	03161482.030	83561482.DAT	JM	005	005	5/28/03	14:25	15:29	1.853M	22.1C	15.1C	45.9	29.33IN
0604	14951482.030	83791482.DAT	TM	006	006	5/28/03	14:27	15:25	1.853M	26.8C	17.5C	35.5	29.23IN
2016	GAST1480.030			008	008	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN
2008	CHME1480.030			007	007	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1022	PARSON	PARS1482.030	0604	GAS 5	14951482.030	5/28/03	14:28	15:25
0239	RV 95	08171482.030	0620	GROVES NCGS 1964	30951482.030	5/28/03	14:20	15:29
0620	GROVES NCGS 1964	30951482.030	1022	PARSON	PARS1482.030	5/28/03	14:20	15:29
0499	PRODUCE	03161482.030	0217	CLT E	22471482.030	5/28/03	14:46	15:29
2016	GASTON CORS ARP	GAST1480.030	1022	PARSON	PARS1482.030	5/28/03	14:17	15:30
0217	CLT E	22471482.030	0239	RV 95	08171482.030	5/28/03	14:46	15:31
2008	CHARLOTTE CORS ARP	CHME1480.030	0217	CLT E	22471482.030	5/28/03	14:46	15:31

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1005	SUNN1483.030	49141483.DAT	MS	002	002	5/28/03	16:00	17:15	1.853M	05.3C	15.2C	31.3	29.10IN
0604	14951483.030	52411483.DAT	WZ	003	003	5/28/03	16:14	17:16	1.853M	26.5C	17.4C	35.0	29.19IN
2029	50661483.030	83791483.DAT	TM	006	006	5/28/03	16:11	17:15	1.853M	27.1C	16.1C	29.9	29.03IN
2016	GAST1480.030			008	008	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 001 occupied station NO this session, data not used.

Receiver JSIN 004 occupied station W 200 this session, data not used.

Receiver JSIN 005 occupied station L 222 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
1005	SUNNYSIDE	SUNN1483.030	2029	PULLOFF	50661483.030	5/28/03	16:11	17:15	
0604	GAS 5	14951483.030	1005	SUNNYSIDE	SUNN1483.030	5/28/03	16:14	17:15	
2016	GASTON CORS ARP	GAST1480.030	1005	SUNNYSIDE	SUNN1483.030	5/28/03	16:00	17:15	

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381484.030	49141484.DAT	MS	002	002	5/28/03	17:40	18:55	1.853M	07.3C	16.7C	29.1	29.18IN
2025	14801484.030	52411484.DAT	WZ	003	003	5/28/03	17:48	18:56	1.853M	27.0C	17.6C	35.1	29.00IN
0133	15381484.030	83521484.DAT	WB	004	004	5/28/03	17:56	18:55	3.153M	23.8C	18.1C	31.1	29.27IN
0148	15351484.030	83561484.DAT	JM	005	005	5/28/03	17:59	18:55	1.853M	28.3C	15.5C	22.9	29.09IN
0620	30951484.030	83791484.DAT	TM	006	006	5/28/03	18:04	18:50	1.853M	28.8C	17.2C	26.2	29.17IN
2016	GAST1480.030			008	008	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2026	NO	50381484.030	2025	N 251	14801484.030	5/28/03	17:50	18:30	
0620	GROVES NCGS 1964	30951484.030	0148	L 222	15351484.030	5/28/03	18:04	18:50	
0148	L 222	15351484.030	0133	J 222 1982	15381484.030	5/28/03	17:59	18:55	
2016	GASTON CORS ARP	GAST1480.030	0148	L 222	15351484.030	5/28/03	17:59	18:55	
0148	L 222	15351484.030	2025	N 251	14801484.030	5/28/03	17:59	18:55	

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0637	48331485.030	49141485.DAT	MS	002	002	5/28/03	19:29	20:30	1.853M	07.5C	18.4C	21.7	28.94IN
2029	50661485.030	52411485.DAT	WZ	003	003	5/28/03	19:28	20:31	1.853M	25.5C	17.5C	43.0	28.90IN
0673	48251485.030	83521485.DAT	WB	004	004	5/28/03	19:34	20:30	1.853M	26.9C	16.8C	31.1	29.04IN
2007	CHAP1485.030	83561485.DAT	JM	005	005	5/28/03	19:31	20:29	1.853M	24.5C	15.8C	32.5	29.02IN
0604	14951485.030	83791485.DAT	TM	006	006	5/28/03	19:17	20:27	1.853M	27.9C	17.0C	27.5	29.15IN
2016	GAST1480.030			008	008	5/28/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 001 occupied staton SUNNYSIDE this session, data not used.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
0673	NORTH	48251485.030	0604	GAS 5	14951485.030	5/28/03	19:35	20:27
0637	ROBINSON	48331485.030	2007	CHAPEL	CHAP1485.030	5/28/03	19:31	20:29
2007	CHAPEL	CHAP1485.030	0673	NORTH	48251485.030	5/28/03	19:35	20:29
2029	PULLOFF	50661485.030	0637	ROBINSON	48331485.030	5/28/03	19:29	20:30
2016	GASTON CORS ARP	GAST1480.030	0673	NORTH	48251485.030	5/28/03	19:35	20:30

DAY 148 GPS WEEK 1220 WEDNESDAY 5/28/03 SESSION 6

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0125	14731485.030	46201485.DAT	JJ	001	001	5/28/03	21:04	22:16	1.853M	24.6C	16.7C	41.4	29.00IN
2007	CHAP1486.030	49141486.DAT	MS	002	002	5/28/03	20:49	22:16	1.853M	09.8C	17.0C	36.1	29.02IN
2025	14801486.030	52411486.DAT	WZ	003	003	5/28/03	21:03	22:16	1.853M	25.8C	17.7C	42.6	28.85IN
0679	48461486.030	83521486.DAT	WB	004	004	5/28/03	21:23	22:15	1.853M	25.7C	17.2C	40.1	28.98IN
1005	SUNN1486.030	83561486.DAT	JM	005	005	5/28/03	21:11	22:14	1.853M	23.3C	16.2C	42.3	28.99IN
0133	15381486.030	83791486.DAT	TM	006	006	5/28/03	21:07	22:10	3.153M	28.7C	17.1C	31.5	29.23IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0679	YORK	48461486.030	0133	J 222 1982	15381486.030	5/28/03	21:23	22:10	
2007	CHAPEL	CHAP1486.030	1005	SUNNYSIDE	SUNN1486.030	5/28/03	21:12	22:14	
1005	SUNNYSIDE	SUNN1486.030	2025	N 251	14801486.030	5/28/03	21:12	22:14	
0679	YORK	48461486.030	0125	W 200	14731485.030	5/28/03	21:23	22:15	
2025	N 251	14801486.030	0679	YORK	48461486.030	5/28/03	21:23	22:15	

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381490.030	46201490.DAT	JJ	001	001	5/29/03	11:17	12:17	1.853M	21.5C	15.5C	56.0	28.94IN
1005	SUNN1490.030	49141490.DAT	MS	002	002	5/29/03	11:11	12:16	1.853M	11.4C	13.8C	68.1	28.83IN
0604	14951490.030	52411490.DAT	BZ	003	003	5/29/03	11:12	12:15	1.853M	15.5C	14.3C	87.4	28.97IN
0125	14731490.030	83521490.DAT	WB	004	004	5/29/03	11:06	12:16	1.853M	19.9C	15.4C	61.9	28.81IN
0148	15351490.030	83561490.DAT	JM	005	005	5/29/03	11:17	12:16	1.853M	18.3C	13.5C	62.6	28.89IN
2029	50661490.030	83791490.DAT	TM	006	006	5/29/03	11:16	12:15	1.853M	16.3C	13.0C	70.2	28.81IN
2016	GAST1490.030			008	008	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0604	GAS 5	14951490.030	0148	L 222	15351490.030	5/29/03	11:17	12:15	
0604	GAS 5	14951490.030	1005	SUNNYSIDE	SUNN1490.030	5/29/03	11:13	12:15	
2029	PULLOFF	50661490.030	2026	NO	50381490.030	5/29/03	11:18	12:15	
2016	GASTON CORS ARP	GAST1490.030	1005	SUNNYSIDE	SUNN1490.030	5/29/03	11:11	12:16	
2026	NO	50381490.030	0125	W 200	14731490.030	5/29/03	11:18	12:16	

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381491.030	46201491.DAT	JJ	001	001	5/29/03	12:31	14:01	1.853M	22.4C	16.4C	55.5	28.91IN
1005	SUNN1491.030	49141491.DAT	MS	002	002	5/29/03	12:45	14:01	1.853M	14.1C	20.7C	36.2	28.81IN
2025	14801491.030	52411491.DAT	BZ	003	003	5/29/03	12:45	14:00	1.853M	28.1C	18.6C	39.9	28.67IN
0133	15381491.030	83521491.DAT	WB	004	004	5/29/03	13:14	14:00	3.153M	21.7C	17.5C	60.1	29.05IN
0148	15351491.030	83561491.DAT	JM	005	005	5/29/03	12:50	13:58	1.853M	23.5C	16.2C	50.3	28.87IN

Receiver JSIN 006 occupied station GROVES NCGS 1964 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2025	N 251	14801491.030	0148	L 222	15351491.030	5/29/03	12:55	13:15	
2026	NO	50381491.030	2025	N 251	14801491.030	5/29/03	12:55	13:25	
0148	L 222	15351491.030	0133	J 222 1982	15381491.030	5/29/03	13:14	13:58	
2025	N 251	14801491.030	1005	SUNNYSIDE	SUNN1491.030	5/29/03	12:46	14:00	

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
1005	SUNN1492.030	46201492.DAT	JJ	001	001	5/29/03	14:33	15:27	1.853M	24.9C	15.7C	43.4	28.81IN
0637	48331492.030	49141492.DAT	MS	002	002	5/29/03	14:21	15:25	1.853M	11.6C	17.7C	43.6	28.72IN
0673	48251492.030	83521492.DAT	WB	004	004	5/29/03	14:31	15:26	1.853M	29.2C	20.0C	38.5	28.84IN
2007	CHAP1492.030	83561492.DAT	JM	005	005	5/29/03	14:35	15:25	1.853M	22.5C	15.0C	53.2	28.80IN
0604	14951492.030	83791492.DAT	TM	006	006	5/29/03	14:27	15:24	1.853M	25.3C	17.6C	41.0	28.94IN
2016	GAST1490.030			008	008	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 003 occupied station PULLOFF this session, data not used.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
0673	NORTH	48251492.030	0604	GAS 5	14951492.030	5/29/03	14:31	15:24
2007	CHAPEL	CHAP1492.030	1005	SUNNYSIDE	SUNN1492.030	5/29/03	14:35	15:25
0637	ROBINSON	48331492.030	2007	CHAPEL	CHAP1492.030	5/29/03	14:35	15:25
2007	CHAPEL	CHAP1492.030	0673	NORTH	48251492.030	5/29/03	14:35	15:25
2016	GASTON CORS ARP	GAST1490.030	0673	NORTH	48251492.030	5/29/03	14:31	15:26

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0125	14731493.030	46201493.DAT	JJ	001	001	5/29/03	15:59	17:06	1.853M	24.1C	16.8C	40.5	28.78IN
2007	CHAP1493.030	49141493.DAT	MS	002	002	5/29/03	15:43	17:05	1.853M	12.1C	17.8C	45.4	28.81IN
2025	14801493.030	52411493.DAT	BZ	003	003	5/29/03	16:05	17:05	1.853M	25.7C	16.4C	27.1	28.64IN
0679	48461493.030	83521493.DAT	WB	004	004	5/29/03	16:19	17:05	1.853M	27.2C	18.1C	34.0	28.78IN
1005	SUNN1493.030	83561493.DAT	JM	005	005	5/29/03	16:06	17:05	1.853M	24.4C	17.1C	37.3	28.77IN
0133	15381493.030	83791493.DAT	TM	006	006	5/29/03	15:58	17:01	3.153M	27.0C	17.1C	35.1	29.03IN
2016	GAST1490.030			008	008	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0679	YORK	48461493.030	0133	J 222 1982	15381493.030	5/29/03	16:19	17:01	
0679	YORK	48461493.030	0125	W 200	14731493.030	5/29/03	16:19	17:05	
2025	N 251	14801493.030	0679	YORK	48461493.030	5/29/03	16:19	17:05	
2025	N 251	14801493.030	1005	SUNNYSIDE	SUNN1493.030	5/29/03	16:06	17:05	
2007	CHAPEL	CHAP1493.030	1005	SUNNYSIDE	SUNN1493.030	5/29/03	16:07	17:05	
2016	GASTON CORS ARP	GAST1490.030	1005	SUNNYSIDE	SUNN1493.030	5/29/03	16:06	17:05	

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2015	GASL1494.030	46201494.DAT	JJ	001	001	5/29/03	17:52	18:41	1.853M	23.6C	16.9C	48.4	28.82IN
0093	48011494.030	49141494.DAT	MS	002	002	5/29/03	17:43	18:40	1.853M	11.0C	18.8C	37.6	28.86IN
2022	78301494.030	52411494.DAT	BZ	003	003	5/29/03	17:49	18:40	1.853M	23.7C	16.0C	42.5	28.80IN
0713	25941494.030	83521494.DAT	WB	004	004	5/29/03	17:54	18:40	1.853M	26.3C	17.4C	37.0	28.94IN
1022	PARS1494.030	83561494.DAT	JM	005	005	5/29/03	17:42	18:39	1.853M	26.1C	16.8C	38.3	28.90IN
0673	48251494.030	83791494.DAT	TM	006	006	5/29/03	17:43	18:39	1.853M	24.5C	14.5C	36.4	28.81IN
2016	GAST1490.030			008	008	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN
2008	CHME1490.030			007	007	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2016	GASTON CORS ARP	GAST1490.030	0673	NORTH	48251494.030	5/29/03	17:43	18:39	
2015	GASLIN	GASL1494.030	1022	PARSON	PARS1494.030	5/29/03	17:52	18:39	
0673	NORTH	48251494.030	2015	GASLIN	GASL1494.030	5/29/03	17:52	18:39	
0093	FROGLEVEL	48011494.030	0713	RHYNE	25941494.030	5/29/03	17:54	18:40	
0093	FROGLEVEL	48011494.030	2022	LAKEVIEW	78301494.030	5/29/03	17:49	18:40	
2008	CHARLOTTE CORS ARP	CHME1490.030	2022	LAKEVIEW	78301494.030	5/29/03	17:49	18:40	
2015	GASLIN	GASL1494.030	0093	FROGLEVEL	48011494.030	5/29/03	17:52	18:40	

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 5

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0239	08171495.030	46201495.DAT	JJ	001	001	5/29/03	19:16	20:21	1.853M	23.0C	17.1C	58.0	29.00IN
1022	PARS1495.030	49141495.DAT	MS	002	002	5/29/03	19:02	20:21	1.853M	10.7C	15.9C	46.7	28.93IN
0217	22471495.030	52411495.DAT	BZ	003	003	5/29/03	19:30	20:21	1.853M	22.7C	16.2C	48.8	28.91IN
0620	30951495.030	83521495.DAT	WB	004	004	5/29/03	19:03	20:23	1.853M	23.9C	16.9C	45.0	28.87IN
0499	03161495.030	83561495.DAT	JM	005	005	5/29/03	19:32	20:21	1.853M	27.9C	20.4C	35.0	29.01IN
0604	14951495.030	83791495.DAT	TM	006	006	5/29/03	19:00	20:17	1.853M	24.1C	16.7C	41.1	28.90IN
2016	GAST1490.030			008	008	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN
2008	CHME1490.030			007	007	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
1022	PARSON	PARS1495.030	0604	GAS 5	14951495.030	5/29/03	19:02	20:17
0217	CLT E	22471495.030	0239	RV 95	08171495.030	5/29/03	19:30	20:21
0239	RV 95	08171495.030	0620	GROVES NCGS 1964	30951495.030	5/29/03	19:16	20:21
0620	GROVES NCGS 1964	30951495.030	1022	PARSON	PARS1495.030	5/29/03	19:03	20:21
2016	GASTON CORS ARP	GAST1490.030	1022	PARSON	PARS1495.030	5/29/03	19:02	20:21
0217	CLT E	22471495.030	0499	PRODUCE	03161495.030	5/29/03	19:32	20:21
2008	CHARLOTTE CORS ARP	CHME1490.030	0217	CLT E	22471495.030	5/29/03	19:30	20:21

DAY 149 GPS WEEK 1220 THURSDAY 5/29/03 SESSION 6

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0239	08171496.030	46201496.DAT	JJ	001	001	5/29/03	20:33	21:46	1.853M	25.2C	18.1C	44.6	28.98IN
0713	25941496.030	49141496.DAT	MS	002	002	5/29/03	20:40	21:45	1.853M	09.1C	15.6C	39.5	28.94IN
2022	78301496.030	52411496.DAT	BZ	003	003	5/29/03	20:52	21:46	1.853M	23.9C	16.3C	43.5	28.80IN
0299	48451496.030	83521496.DAT	WB	004	004	5/29/03	20:49	21:44	1.853M	23.0C	17.1C	60.5	29.01IN
0499	03161496.030	83561496.DAT	JM	005	005	5/29/03	20:53	21:44	1.853M	22.3C	20.0C	59.5	29.00IN
0133	15381496.030	83791496.DAT	TM	006	006	5/29/03	20:51	21:47	3.153M	25.1C	18.2C	50.2	28.99IN
2008	CHME1490.030			007	007	5/29/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0299	WYLIE AZ MK	48451496.030	0499	PRODUCE	03161496.030	5/29/03	20:53	21:44	
0133	J 222 1982	15381496.030	0299	WYLIE AZ MK	48451496.030	5/29/03	21:00	21:44	
0239	RV 95	08171496.030	0299	WYLIE AZ MK	48451496.030	5/29/03	20:49	21:44	
2022	LAKEVIEW	78301496.030	0713	RHYNE	25941496.030	5/29/03	20:52	21:45	
2008	CHARLOTTE CORS ARP	CHME1490.030	0713	RHYNE	25941496.030	5/29/03	20:40	21:45	
0713	RHYNE	25941496.030	0239	RV 95	08171496.030	5/29/03	20:40	21:45	

BEGIN RE-OBSERVATIONS AND REPAIRS

DAY 175 GPS WEEK 1224 TUESDAY 6/24/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381750.030	46201750.DAT	JJ	001	001	6/24/03	11:41	13:02	1.853M	21.4C	17.4C	60.3	29.28IN
1005	SUNN1750.030	49141750.DAT	MS	002	002	6/24/03	11:44	13:00	1.853M	27.9C	20.6C	48.5	29.18IN
0637	48331750.030	52411750.DAT	BZ	003	003	6/24/03	11:51	13:01	1.853M	24.6C	19.0C	61.0	29.09IN
2029	50661750.030	83521750.DAT	WM	004	004	6/24/03	12:10	13:28	1.853M	25.0C	18.8C	63.5	29.15IN
2023	09301750.030	83561750.DAT	TM	005	005	6/24/03	11:58	13:01	1.853M	22.4C	18.2C	66.1	29.21IN
2016	GAST1750.030			008	008	6/24/03	11:00	23:00	0.063M	. C	. C	.	. IN

Receiver JSIN 006 occupied station W 200 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2016	GASTON CORS ARP	GAST1750.030	1005	SUNNYSIDE	SUNN1750.030	6/24/03	11:44	13:00	
1005	SUNNYSIDE	SUNN1750.030	2029	PULLOFF	50661750.030	6/24/03	12:11	13:00	
0637	ROBINSON	48331750.030	2029	PULLOFF	50661750.030	6/24/03	12:11	13:01	
2026	NO	50381750.030	2023	M 77	09301750.030	6/24/03	12:05	13:01	
2029	PULLOFF	50661750.030	2023	M 77	09301750.030	6/24/03	12:11	13:01	

DAY 175 GPS WEEK 1224 TUESDAY 6/24/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381751.030	46201751.DAT	JJ	001	001	6/24/03	13:05	14:55	1.853M	26.5C	18.7C	55.0	29.32IN
1022	PARS1751.030	49141751.DAT	MS	002	002	6/24/03	13:34	14:55	1.853M	28.8C	21.3C	43.5	29.34IN
0604	14951751.030	52411751.DAT	BZ	003	003	6/24/03	13:35	14:55	1.853M	34.8C	23.4C	32.9	29.33IN
2029	50661751.030	83521751.DAT	WM	004	004	6/24/03	13:28	14:53	1.853M	27.0C	19.8C	53.9	29.16IN
0148	15351751.030	83561751.DAT	TM	005	005	6/24/03	14:06	14:55	1.853M	28.4C	21.0C	64.3	29.26IN
0620	30951751.030	83791751.DAT	WB	006	006	6/24/03	13:39	14:55	1.853M	28.5C	23.0C	50.3	29.32IN
2016	GAST1750.030			008	008	6/24/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2029	PULLOFF	50661751.030	2026	NO	50381751.030	6/24/03	13:28	14:53	
0604	GAS 5	14951751.030	1022	PARSON	PARS1751.030	6/24/03	13:36	14:55	
0620	GROVES NCGS 1964	30951751.030	0148	L 222	15351751.030	6/24/03	14:06	14:55	
0604	GAS 5	14951751.030	0148	L 222	15351751.030	6/24/03	14:06	14:55	
2016	GASTON CORS ARP	GAST1750.030	0148	L 222	15351751.030	6/24/03	14:06	14:55	
1022	PARSON	PARS1751.030	0620	GROVES NCGS 1964	30951751.030	6/24/03	13:39	14:55	

DAY 175 GPS WEEK 1224 TUESDAY 6/24/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901752.030	46201752.DAT	JJ	001	001	6/24/03	15:21	16:31	1.853M	31.5C	21.2C	30.3	29.36IN
1025	DOOL1752.030	49141752.DAT	MS	002	002	6/24/03	15:15	16:30	1.853M	33.3C	22.3C	36.2	29.29IN
2028	31681752.030	52411752.DAT	BZ	003	003	6/24/03	15:29	16:30	1.853M	33.1C	21.5C	31.4	29.35IN
1020	CARR1752.030	83521752.DAT	WM	004	004	6/24/03	15:28	16:29	1.853M	30.5C	21.0C	44.2	29.28IN
0239	08171752.030	83561752.DAT	TM	005	005	6/24/03	15:35	16:31	1.853M	27.5C	20.8C	42.1	29.44IN
0620	30951752.030	83791752.DAT	WB	006	006	6/24/03	14:55	16:26	1.853M	29.1C	23.5C	52.0	29.31IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
1025	DOOLEY	DOOL1752.030	0620	GROVES NCGS 1964	30951752.030	6/24/03	15:15	16:26	
1025	DOOLEY	DOOL1752.030	1020	CARR	CARR1752.030	6/24/03	15:28	16:29	
2028	POINT NCGS 1965	31681752.030	0239	RV 95	08171752.030	6/24/03	15:35	16:30	
1025	DOOLEY	DOOL1752.030	0554	COMB	14901752.030	6/24/03	15:21	16:30	

DAY 175 GPS WEEK 1224 TUESDAY 6/24/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0760	14871753.030	49141753.DAT	MS	002	002	6/24/03	16:52	18:00	1.853M	36.6C	24.8C	16.6	29.24IN
0299	48451753.030	52411753.DAT	BZ	003	003	6/24/03	16:50	18:00	1.853M	35.6C	23.7C	34.0	29.43IN
0723	07871753.030	83521753.DAT	WM	004	004	6/24/03	16:57	17:58	1.853M	33.5C	21.6C	34.9	29.22IN
2037	TEAK1753.030	83561753.DAT	TM	005	005	6/24/03	16:52	18:00	1.853M	33.0C	20.8C	33.1	29.39IN

Receiver JSIN 001 occupied station COLE NCGS 1964 this session, data not used.

Receiver JSIN 006 occupied station RHYNE this session, data not used.

BASELINES USED

FROM STATION			TO STATION					
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END
0723	RV 76	07871753.030	0760	T 251	14871753.030	6/24/03	16:57	17:58
2037	TEAK	TEAK1753.030	0299	WYLIE AZ MK	48451753.030	6/24/03	16:52	18:00

DAY 175 GPS WEEK 1224 TUESDAY 6/24/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2038	48391754.030	46201754.DAT	JJ	001	001	6/24/03	18:32	19:41	1.853M	29.4C	19.5C	38.1	29.07IN
0792	48431754.030	49141754.DAT	MS	002	002	6/24/03	18:35	19:40	1.853M	32.7C	21.6C	35.6	29.09IN
2025	14801754.030	52411754.DAT	BZ	003	003	6/24/03	18:43	19:40	1.853M	30.8C	21.0C	35.4	29.04IN
2014	48001754.030	83521754.DAT	WM	004	004	6/24/03	18:35	19:39	1.853M	33.8C	21.6C	35.1	29.14IN
0660	07801754.030	83561754.DAT	TM	005	005	6/24/03	18:36	19:41	1.853M	32.9C	21.5C	35.7	29.16IN
2013	DUKE1754.030	83791754.DAT	WB	006	006	6/24/03	18:45	19:40	1.853M	33.3C	22.3C	34.0	29.11IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2038	WARLICK AZ MK	48391754.030	2014	FISHCAMP AZ MK	48001754.030	6/24/03	18:36	19:39	
0792	WHITERSPOONS	48431754.030	2014	FISHCAMP AZ MK	48001754.030	6/24/03	18:36	19:39	
2038	WARLICK AZ MK	48391754.030	0792	WHITERSPOONS	48431754.030	6/24/03	18:35	19:40	
0660	M 40	07801754.030	2025	N 251	14801754.030	6/24/03	18:43	19:40	
2013	DUKECO	DUKE1754.030	2025	N 251	14801754.030	6/24/03	18:45	19:40	
2013	DUKECO	DUKE1754.030	2038	WARLICK AZ MK	48391754.030	6/24/03	18:45	19:40	

DAY 176 GPS WEEK 1224 WEDNESDAY 6/25/03 SESSION 0

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
0554	14901760.030	46201760.DAT	JJ	001	001	6/25/03	11:40	13:01	1.853M	24.3C	19.6C	61.1	29.38IN
1025	DOOL1760.030	49141760.DAT	MS	002	002	6/25/03	11:35	13:00	1.853M	31.4C	23.8C	51.4	29.35IN
2028	31681760.030	52411760.DAT	BZ	003	003	6/25/03	11:44	13:01	1.853M	22.6C	19.6C	76.1	29.42IN
1020	CARR1760.030	83521760.DAT	WM	004	004	6/25/03	11:48	13:00	1.853M	24.6C	18.7C	68.5	29.35IN
0239	08171760.030	83561760.DAT	TM	005	005	6/25/03	11:51	13:01	1.853M	26.4C	21.9C	65.8	29.50IN

Receiver JSIN 006 occupied staton GROVES NCGS 1964 this session, data not used.

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
1025	DOOLEY	DOOL1760.030	1020	CARR	CARR1760.030	6/25/03	11:48	13:00	
1025	DOOLEY	DOOL1760.030	0554	COMB	14901760.030	6/25/03	11:40	13:00	
0239	RV 95	08171760.030	2028	POINT NCGS 1965	31681760.030	6/25/03	11:51	13:01	

DAY 176 GPS WEEK 1224 WEDNESDAY 6/25/03 SESSION 1

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2009	31991761.030	46201761.DAT	JJ	001	001	6/25/03	13:18	14:40	1.853M	25.9C	20.1C	60.8	29.38IN
0760	14871761.030	49141761.DAT	MS	002	002	6/25/03	13:21	14:40	1.853M	30.0C	29.2C	01.2	29.30IN
0299	48451761.030	52411761.DAT	BZ	003	003	6/25/03	13:18	14:41	1.853M	29.6C	23.4C	54.3	29.50IN
0723	07871761.030	83521761.DAT	WM	004	004	6/25/03	13:30	14:38	1.853M	30.8C	23.0C	50.1	29.28IN
2037	TEAK1761.030	83561761.DAT	TM	005	005	6/25/03	13:33	14:41	1.853M	27.3C	24.5C	62.2	29.47IN
0713	25941761.030	83791761.DAT	WB	006	006	6/25/03	13:20	14:38	1.853M	29.1C	20.8C	45.0	29.44IN
2008	CHME1760.030			007	007	6/25/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
0723	RV 76	07871761.030	0760	T 251	14871761.030	6/25/03	13:31	14:38	
2008	CHARLOTTE CORS ARP	CHME1760.030	0713	RHYNE	25941761.030	6/25/03	13:20	14:38	
0760	T 251	14871761.030	2009	COLE NCGS 1964	31991761.030	6/25/03	13:21	14:40	
2037	TEAK	TEAK1761.030	0299	WYLIE AZ MK	48451761.030	6/25/03	13:33	14:41	

DAY 176 GPS WEEK 1224 WEDNESDAY 6/25/03 SESSION 2

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2038	48391762.030	46201762.DAT	JJ	001	001	6/25/03	15:09	16:20	1.853M	31.0C	21.6C	40.6	29.13IN
0792	48431762.030	49141762.DAT	MS	002	002	6/25/03	15:11	16:20	1.853M	37.0C	34.1C	01.2	29.16IN
2025	14801762.030	52411762.DAT	BZ	003	003	6/25/03	15:23	16:21	1.853M	32.4C	21.2C	35.2	29.10IN
2014	48001762.030	83521762.DAT	WM	004	004	6/25/03	15:12	16:18	1.853M	30.1C	21.1C	46.5	29.20IN
0660	07801762.030	83561762.DAT	TM	005	005	6/25/03	15:21	16:20	1.853M	34.6C	21.1C	25.6	29.21IN
2013	DUKE1762.030	83791762.DAT	WB	006	006	6/25/03	15:22	16:17	1.853M	32.8C	22.6C	38.1	29.17IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2038	WARLICK AZ MK	48391762.030	2013	DUKECO	DUKE1762.030	6/25/03	15:22	16:17	
2014	FISHCAMP AZ MK	48001762.030	2038	WARLICK AZ MK	48391762.030	6/25/03	15:12	16:18	
2038	WARLICK AZ MK	48391762.030	0792	WHITERSPOONS	48431762.030	6/25/03	15:11	16:20	
2025	N 251	14801762.030	0660	M 40	07801762.030	6/25/03	15:23	16:20	

DAY 176 GPS WEEK 1224 WEDNESDAY 6/25/03 SESSION 3

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381763.030	46201763.DAT	JJ	001	001	6/25/03	16:45	18:01	1.853M	27.5C	21.1C	55.4	29.33IN
1005	SUNN1763.030	49141763.DAT	MS	002	002	6/25/03	16:36	18:00	1.853M	31.3C	29.3C	01.2	29.22IN
0637	48331763.030	52411763.DAT	BZ	003	003	6/25/03	16:52	18:02	1.853M	34.4C	22.3C	34.6	29.12IN
2029	50661763.030	83521763.DAT	WM	004	004	6/25/03	16:43	18:09	1.853M	31.4C	21.1C	37.7	29.17IN
2023	09301763.030	83561763.DAT	TM	005	005	6/25/03	17:02	18:00	1.853M	33.6C	21.5C	38.6	29.25IN
0125	14731763.030	83791763.DAT	WB	006	006	6/25/03	16:47	17:57	1.853M	35.5C	23.6C	32.1	29.22IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2026	NO	50381763.030	0125	W 200	14731763.030	6/25/03	16:48	17:57	
2023	M 77	09301763.030	2026	NO	50381763.030	6/25/03	17:02	18:00	
2029	PULLOFF	50661763.030	2023	M 77	09301763.030	6/25/03	17:02	18:00	
1005	SUNNYSIDE	SUNN1763.030	2029	PULLOFF	50661763.030	6/25/03	16:43	18:00	
0637	ROBINSON	48331763.030	2029	PULLOFF	50661763.030	6/25/03	16:52	18:02	

DAY 176 GPS WEEK 1224 WEDNESDAY 6/25/03 SESSION 4

OCCUPATION INFORMATION

SSN	RINEX FILE	TRIMBLE FILE	OPR	JSIN	JSAN	DATE	START	END	L1 HI	DRY	WET	HUMID	PRESS
2026	50381764.030	46201764.DAT	JJ	001	001	6/25/03	18:04	19:41	1.853M	28.7C	20.3C	45.8	29.30IN
1022	PARS1764.030	49141764.DAT	MS	002	002	6/25/03	18:30	19:40	1.853M	30.5C	27.4C	01.2	29.34IN
0604	14951764.030	52411764.DAT	BZ	003	003	6/25/03	18:39	19:42	1.853M	37.0C	23.1C	30.0	29.33IN
2029	50661764.030	83521764.DAT	WM	004	004	6/25/03	18:09	19:39	1.853M	32.5C	21.3C	35.1	29.18IN
0148	15351764.030	83561764.DAT	TM	005	005	6/25/03	18:45	19:41	1.853M	31.9C	21.5C	34.2	29.25IN
0620	30951764.030	83791764.DAT	WB	006	006	6/25/03	18:33	19:43	1.853M	37.5C	23.0C	29.0	29.34IN
2016	GAST1760.030			008	008	6/25/03	11:00	23:00	0.063M	. C	. C	.	. IN

BASELINES USED

FROM STATION			TO STATION						
SSN	STATION NAME	RINEX FILE	SSN	STATION NAME	RINEX FILE	DATE	START	END	
2026	NO	50381764.030	2029	PULLOFF	50661764.030	6/25/03	18:09	19:39	
0604	GAS 5	14951764.030	1022	PARSON	PARS1764.030	6/25/03	18:39	19:40	
0620	GROVES NCGS 1964	30951764.030	0148	L 222	15351764.030	6/25/03	18:45	19:41	
0604	GAS 5	14951764.030	0148	L 222	15351764.030	6/25/03	18:45	19:41	
2016	GASTON CORS ARP	GAST1760.030	0148	L 222	15351764.030	6/25/03	18:45	19:41	

		VECTOR RESIDUALS										
from	to	from	to	dx	dy	dz	de	dn	du	dh	dd	
4char.	id.	sta.	ser.#	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	
4801	2594	14934	93 713	1648.0740	-6808.3974	-9893.4033	559.6766	-12109.2969	-39.2810	-27.7227	12122.	
		14830	93 713	-.0033	-.0015	-.0077	-.0035	-.0068	-.0037	-.0037	.0085	
4801	CATA (s)	14430	93 2005	-992.5431	-2371.4431	-3119.8249	-1352.2503	-3809.5909	-25.0551	-23.7704	4043.	
	(s)	14733	93 2005	.0079	-.0116	.0010	.0060	-.0065	.0109	.0109	.0141	
4801	GASL (s)	14934	93 2015	-9835.1319	-1213.8503	486.9057	-9903.7844	596.1388	1.6835	9.3920	9922.	
	(s)	14830	93 2015	.0012	.0076	-.0127	.0024	-.0061	-.0133	-.0133	.0148	
4801	HINE	14733	93 2018	-5933.8641	-556.4416	513.9313	-5947.6897	639.7755	-13.0659	-10.2636	5982.	
		14430	93 2018	-.0068	-.0158	.0087	-.0092	-.0013	.0169	.0169	.0193	
4801	7830	14934	93 2022	13171.2848	-1826.5570	-5456.4582	12721.7049	-6689.5572	-6.2160	9.9768	14373.	
		14830	93 2022	-.0018	.0028	-.0076	-.0013	-.0044	-.0069	-.0069	.0083	
3603	HAVE	14531	111 1035	384.5186	-2595.2991	-3748.4811	-19.2768	-4575.3560	-16.9781	-15.3315	4575.	
	(s)	14034	111 1035	.0428	-.0086	-.0120	.0410	-.0185	.0054	.0054	.0453	
3603	GLOV	14634	111 2017	4606.4736	-254.1109	-1398.8392	4512.5603	-1696.2400	-22.1672	-20.3464	4821.	
		14331	111 2017	-.0011	.0020	.0112	-.0008	.0104	.0047	.0047	.0114	
3603	SALU (s)	14330	111 2034	650.2711	2432.6443	3224.6053	1016.7305	3962.8767	-23.6089	-22.2927	4091.	
	(s)	14633	111 2034	-.0015	-.0040	.0056	-.0021	.0024	.0063	.0063	.0070	
1473	4846 (s)	14836	125 679	11181.5249	1190.3594	-710.4724	11234.2375	-860.2167	-12.6311	-2.6900	11267.	
	(s)	14933	125 679	-.0021	.0112	-.0092	-.0004	-.0010	-.0146	-.0146	.0146	
1473	5038 (s)	17633	125 2026	-2085.0301	5755.1393	8442.9995	-1206.2883	10358.3908	-42.7515	-34.1978	10428.	
	(s)	14930	125 2026	-.0138	-.0108	.0096	-.0153	.0029	.0126	.0126	.0200	
1538	1535 (s)	14834	133 148	-375.2673	4032.6788	5822.7273	246.3947	7088.3242	49.2585	53.2154	7093.	
	(s)	14931	133 148	-.0057	.0106	-.0004	-.0040	.0062	-.0095	-.0095	.0120	
1538	4845	14936	133 299	12891.7963	1047.8697	-1360.8963	12900.2782	-1652.5741	-17.3589	-4.1126	13006.	
	(s)	14831	133 299	-.0012	.0080	-.0008	.0000	.0040	-.0071	-.0071	.0081	
1538	4846 (s)	14933	133 679	-11748.1604	-2461.7785	-801.1245	-11986.5302	-1020.4099	57.3093	68.6418	12030.	
	(s)	14836	133 679	-.0196	.0080	-.0030	-.0181	.0038	-.0106	-.0106	.0214	
1538	HAVE	14035	133 1035	4073.2423	-45.6526	-897.9834	4018.2595	-1119.1488	29.2803	30.6431	4171.	
	(s)	14531	133 1035	-.0282	.0101	-.0021	-.0263	.0065	-.0129	-.0129	.0300	
1538	CHAN	14531	133 2006	-1033.4188	2428.9946	3703.9271	-649.4610	4501.4980	41.9709	43.5978	4548.	
	(s)	14034	133 2006	.0321	-.0014	.0154	.0315	.0090	.0140	.0140	.0356	
1538	CRAW	14531	133 2011	-2609.0417	-367.3762	114.5643	-2634.5297	114.5545	36.3224	36.8669	2637.	
	(s)	14034	133 2011	.0303	-.0004	.0012	.0299	-.0019	.0048	.0048	.0303	

1535	1495	(s)	17531	148	604	-887.9547	5732.1553	8151.5216	.1436	10004.6055	-35.2183	-27.3453	10005.
		(s)	17634	148	604	-.0079	.0005	-.0010	-.0077	.0002	-.0020	-.0020	.0080
		(s)	14930	148	604	-.0020	-.0049	.0132	-.0027	.0082	.0113	.0113	.0142
1535	3095	(s)	17634	148	620	8248.0541	3066.1264	2456.8203	8620.2505	3026.2345	-26.0552	-19.5161	9136.
		(s)	17531	148	620	.0045	.0067	-.0046	.0055	-.0003	-.0075	-.0075	.0093
		(s)	14834	148	620	.0024	.0069	.0094	.0034	.0114	.0002	.0002	.0119
1535	CHAN	(s)	14035	148	2006	-658.1203	-1603.6790	-2118.7814	-895.8942	-2586.7765	-10.1962	-9.6070	2738.
		(s)	14532	148	2006	.0030	-.0006	-.0058	.0029	-.0053	-.0025	-.0025	.0066
1535	GAST	(s)	17530	148	2016	-379.0083	4973.5096	7022.2757	386.9359	8604.7642	-10.6818	-4.8461	8613.
		(s)	14830	148	2016	.0075	-.0036	-.0073	.0069	-.0087	-.0004	-.0004	.0111
		(s)	17630	148	2016	-.0158	.0012	-.0008	-.0154	.0014	-.0034	-.0034	.0159
1535	1480		14834	148	2025	-12374.8623	-429.8920	2158.4210	-12294.7785	2610.9837	44.6331	57.0060	12569.
		(s)	14931	148	2025	-.0008	-.0021	-.0130	-.0011	-.0117	-.0059	-.0059	.0132
1535	SALU		14035	148	2034	4714.2571	949.6334	252.3796	4804.0696	331.1358	-31.3648	-29.5490	4816.
			14532	148	2034	.0046	-.0064	.0055	.0036	.0004	.0089	.0089	.0096
4823	HAVE	(s)	14531	172	1035	-3429.6054	-265.0991	415.2074	-3429.3915	493.6987	20.0784	21.0185	3465.
		(s)	14034	172	1035	-.0018	.0147	-.0010	.0005	.0077	-.0127	-.0127	.0148
4823	WILL	(s)	14331	172	2039	2894.4671	123.7381	-455.4158	2878.8403	-559.3942	3.3745	4.0481	2933.
		(s)	14634	172	2039	-.0052	-.0034	.0030	-.0057	.0010	.0038	.0038	.0069
2247	0817		14935	217	239	-7548.5045	356.0740	2134.2821	-7398.3493	2631.6439	-27.3394	-22.5085	7853.
			14832	217	239	-.0098	-.0027	-.0066	-.0101	-.0060	-.0029	-.0029	.0121
2247	0316		14935	217	499	-705.8008	-6545.2529	-9061.8866	-1727.2941	-11066.6833	-35.4320	-25.5650	11201.
		(s)	14832	217	499	-.0030	-.0189	.0015	-.0059	-.0093	.0157	.0157	.0192
2247	CHME	(s)	14830	217	2008	4260.1081	4669.2480	5644.5656	4941.9876	6883.8226	35.5476	41.1874	8474.
		(s)	14930	217	2008	.0046	.0062	.0044	.0055	.0067	-.0019	-.0019	.0089
0817	4845		14936	239	299	-1820.3964	-5703.4239	-7588.4098	-2687.8954	-9284.5025	-9.0244	-1.6782	9666.
			14831	239	299	.0015	.0092	-.0034	.0029	.0023	-.0092	-.0092	.0099
0817	3095		14832	239	620	-6839.3962	347.5259	2052.0490	-6701.4341	2489.7325	32.1277	36.1319	7149.
			14935	239	620	-.0109	-.0226	-.0078	-.0143	-.0183	.0123	.0124	.0263
0817	2594	(s)	14831	239	713	4486.6524	4091.3479	4751.4862	5070.0052	5808.6737	12.4762	17.1430	7710.
		(s)	14936	239	713	-.0008	.0089	.0081	.0006	.0118	-.0026	-.0026	.0121
0817	BELM	(s)	14730	239	2004	-2365.2468	479.8923	1218.8769	-2261.4178	1481.9320	14.7237	15.2969	2704.
		(s)	14333	239	2004	.0009	.0076	-.0104	.0021	-.0042	-.0120	-.0120	.0129
0817	3168		17630	239	2028	47.1181	-2094.7707	-2899.7087	-280.2631	-3566.4440	22.9077	23.9144	3578.
		(s)	17532	239	2028	.0027	.0025	.0174	.0031	.0154	.0084	.0084	.0178
3149	1490	(s)	14632	263	554	-2667.4953	873.3574	1754.4204	-2501.6009	2167.3916	-26.1098	-25.2502	3310.
		(s)	14135	263	554	.0049	-.0056	.0074	.0040	.0024	.0094	.0094	.0105

3149	1487	(s)	14330	263	760	-3507.4422	-1208.3650	-931.9999	-3651.4719	-1139.1497	-3.4244	-2.2783	3825.
		(s)	14633	263	760	-.0001	.0167	-.0002	.0025	.0094	-.0136	-.0136	.0167
3149	SALU		14330	263	2034	2147.9513	-1953.9165	-3252.8068	1822.1772	-3961.1668	-32.6228	-31.1286	4360.
			14633	263	2034	-.0021	-.0010	-.0034	-.0022	-.0032	-.0014	-.0014	.0041
4845	0316		14936	299	499	8663.1073	-1197.9246	-3607.7670	8371.4485	-4406.7238	-8.3796	-1.3643	9460.
			14831	299	499	-.0037	.0075	.0048	-.0025	.0085	-.0038	-.0038	.0096
4845	REES		14635	299	2031	2864.5133	1462.4941	1448.6635	3057.0879	1759.7932	17.1152	18.0907	3527.
			14332	299	2031	.0064	-.0045	-.0007	.0056	-.0037	.0040	.0040	.0079
4845	TEAK	(s)	14634	299	2037	-874.3630	1928.9044	2930.6182	-563.7804	3571.4872	18.3513	19.3795	3616.
		(s)	17533	299	2037	.0143	-.0119	.0098	.0123	.0000	.0171	.0171	.0210
		(s)	17631	299	2037	.0059	-.0034	.0058	.0053	.0023	.0068	.0068	.0089
4845	WILL		14331	299	2039	-2494.4787	-704.6923	-407.7046	-2573.7156	-510.8118	17.2559	17.7951	2624.
		(s)	14634	299	2039	.0024	.0025	-.0025	.0028	-.0008	-.0032	-.0032	.0043
3656	GASL	(s)	14431	301	2015	3327.3010	539.3788	-18.0596	3370.6804	-3.5016	-26.2457	-25.3560	3371.
		(s)	14734	301	2015	-.0066	-.0025	.0055	-.0069	.0036	.0044	.0044	.0089
3656	IRON		14431	301	2020	-3608.1041	-459.5550	119.0037	-3635.7983	156.5803	-14.8805	-13.8434	3639.
			14734	301	2020	.0032	.0001	-.0042	.0032	-.0037	-.0021	-.0021	.0053
4790	BEAM	(s)	14535	525	2003	-1835.5771	1752.3308	2789.4809	-1551.8054	3436.9521	-21.6833	-20.5656	3771.
		(s)	14132	525	2003	.0039	-.0029	-.0084	.0034	-.0088	-.0020	-.0021	.0097
4790	4800	(s)	14433	525	2014	-3663.9717	-3129.6214	-3610.1360	-4092.1563	-4416.5928	-16.2824	-13.4369	6021.
		(s)	14030	525	2014	.0095	-.0090	.0065	.0080	-.0007	.0122	.0122	.0146
1490	1495	(s)	14631	554	604	-786.7689	1955.2516	2891.9061	-477.9430	3546.3620	-4.6904	-3.6833	3578.
		(s)	14134	554	604	-.0005	-.0119	.0057	-.0023	-.0021	.0128	.0128	.0132
1490	0787		14130	554	723	-4653.9611	-1180.4766	-588.9035	-4779.8697	-742.7203	29.9799	31.8124	4837.
		(s)	14533	554	723	-.0072	.0044	.0074	-.0064	.0092	-.0002	-.0002	.0112
1490	DOOL	(s)	17630	554	1025	4804.0481	840.0581	145.8918	4876.0339	173.4893	7.4189	9.2830	4879.
		(s)	17532	554	1025	-.0169	.0068	-.0065	-.0157	.0001	-.0114	-.0114	.0193
1490	GAST	(s)	14630	554	2016	-277.8253	1196.6081	1762.6575	-91.2290	2146.4753	18.4492	18.8122	2148.
		(s)	14530	554	2016	.0015	-.0054	.0017	.0007	-.0018	.0055	.0055	.0059
		(s)	14130	554	2016	.0003	-.0102	.0012	-.0013	-.0049	.0090	.0090	.0103
		(s)	14630	554	2016	-.0018	.0026	-.0100	-.0014	-.0065	-.0081	-.0081	.0105
		(s)	14130	554	2016	.0008	-.0098	-.0076	-.0007	-.0119	.0036	.0036	.0124
		(s)	14130	554	2016	.0011	-.0095	-.0023	-.0004	-.0074	.0065	.0065	.0098
4380	4846	(s)	14137	594	679	-5183.0862	-880.6540	-99.1587	-5256.7027	-129.2857	11.3504	13.5155	5258.
		(s)	14530	594	679	.0022	.0152	-.0034	.0045	.0057	-.0140	-.0140	.0157
4380	CRAW		14530	594	2011	3956.0631	1213.7582	816.5273	4094.4569	1012.6190	-19.6584	-18.2650	4218.
			14136	594	2011	.0040	.0023	.0112	.0043	.0101	.0051	.0051	.0121

1495	4825	(s)	14835	604	673	-1749.3832	5323.1589	7840.9912	-913.7482	9593.8540	23.1364	30.4414	9637.
		(s)	14932	604	673	.0011	-.0194	-.0053	-.0019	-.0155	.0127	.0127	.0201
1495	SUNN		14833	604	1005	-9829.0741	-1343.3162	310.5371	-9918.8568	355.9474	34.7981	42.5119	9925.
			14930	604	1005	.0068	.0061	-.0101	.0077	-.0054	-.0099	-.0099	.0136
1495	FRID		14134	604	1012	214.5520	3042.7706	4160.4216	677.8898	5114.0608	-20.9868	-18.8937	5159.
		(s)	14631	604	1012	-.0022	.0015	-.0026	-.0019	-.0011	-.0030	-.0030	.0037
1495	PARS		17531	604	1022	11450.1549	3095.2250	1820.3274	11789.0529	2240.1173	-12.7667	-1.4890	12000.
			17634	604	1022	.0122	-.0004	-.0112	.0120	-.0104	-.0046	-.0046	.0166
		(s)	14832	604	1022	.0077	-.0122	-.0040	.0057	-.0109	.0085	.0085	.0150
		(s)	14935	604	1022	.0108	.0015	-.0103	.0109	-.0085	-.0058	-.0058	.0150
1495	GAST	(s)	14130	604	2016	508.9440	-758.6409	-1129.2537	386.7907	-1399.8816	22.3247	22.4905	1453.
		(s)	14630	604	2016	-.0007	-.0048	.0052	-.0014	.0016	.0068	.0068	.0071
1495	HUBB		14134	604	2019	-4850.2898	-281.4954	739.8024	-4836.2023	872.1369	48.8191	50.7104	4914.
		(s)	14631	604	2019	-.0057	.0018	.0008	-.0054	.0022	-.0017	-.0017	.0060
3095	PARS		14935	620	1022	2314.1493	5761.2290	7515.0334	3177.7679	9215.4372	-16.7657	-9.2951	9748.
			14832	620	1022	-.0114	-.0189	-.0043	-.0142	-.0133	.0113	.0113	.0225
		(s)	17531	620	1022	-.0081	.0108	.0030	-.0063	.0093	-.0080	-.0080	.0138
3095	DOOL	(s)	17532	620	1025	-3545.1912	1550.8350	2948.6954	-3262.5142	3608.9146	3.2844	5.1424	4865.
		(s)	14135	620	1025	-.0165	.0059	-.0175	-.0154	-.0095	-.0169	-.0169	.0248
3095	REDL		14731	620	1026	1239.9320	2763.7836	3610.5181	1652.6649	4413.6537	11.4715	13.2176	4713.
			14334	620	1026	-.0045	.0021	.0197	-.0041	.0177	.0091	.0091	.0203
3095	BELM		14330	620	2004	4474.1286	132.3894	-833.1830	4440.7247	-1004.4928	-22.4859	-20.8624	4553.
			14634	620	2004	.0146	.0098	.0202	.0159	.0208	.0056	.0056	.0268
3095	SALU	(s)	14633	620	2034	-3533.7989	-2116.4999	-2204.4297	-3818.7421	-2691.4471	-11.7327	-10.0210	4672.
		(s)	14330	620	2034	-.0158	-.0017	-.0143	-.0159	-.0112	-.0089	-.0089	.0214
4833	BAXT		14433	637	2002	-1747.2057	-913.8673	-876.9512	-1864.0774	-1087.1539	15.3820	15.7470	2158.
			14030	637	2002	.0003	-.0009	.0023	.0002	.0013	.0021	.0021	.0025
4833	BEAM	(s)	14030	637	2003	2487.9127	-278.0147	-946.7908	2418.5063	-1146.1907	-22.1107	-21.5493	2676.
		(s)	14433	637	2003	.0071	-.0140	.0036	.0049	-.0057	.0142	.0142	.0161
4833	CHAP		14932	637	2007	10834.5085	605.5230	-1498.9631	10803.4570	-1812.1693	-38.4982	-29.1006	10954.
			14835	637	2007	.0028	.0017	.0041	.0030	.0041	.0013	.0014	.0052
4833	5066		17633	637	2029	-3218.7573	-6004.5919	-7717.0205	-4079.2863	-9451.2762	-26.9890	-18.6599	10294.
			17530	637	2029	-.0026	-.0030	-.0067	-.0030	-.0070	-.0018	-.0018	.0078
		(s)	14835	637	2029	-.0011	.0016	-.0108	-.0008	-.0078	-.0077	-.0077	.0110
0780	SUNN		14032	660	1005	-1835.7316	2455.4193	3799.1710	-1442.5509	4663.8562	-13.6633	-11.7894	4882.
		(s)	14435	660	1005	-.0073	.0051	.0003	-.0064	.0038	-.0048	-.0048	.0089

0780	1480	17534	660	2025	-3493.5642	-2363.3379	-2504.4635	-3811.2815	-3088.0469	28.1855	30.0730	4905.
	(s)	17632	660	2025	-.0002	-.0090	.0135	-.0016	.0059	.0150	.0150	.0162
0780	ORCH	(s) 14130	660	2027	2229.7141	-2272.7027	-3674.6640	1859.6671	-4492.3740	-13.1222	-11.2640	4862.
	(s)	14533	660	2027	-.0093	-.0053	.0104	-.0100	.0063	.0091	.0091	.0149
4825	FRID	(s) 14133	673	1012	1963.9377	-2280.3750	-3680.5609	1592.0909	-4479.5450	-51.1170	-49.3402	4754.
	(s)	14630	673	1012	-.0016	-.0082	.0040	-.0028	-.0013	.0087	.0087	.0093
4825	CHAP	(s) 14835	673	2007	-8120.4506	-1200.9014	88.2140	-8208.5836	103.8280	6.1985	11.4756	8209.
	(s)	14932	673	2007	.0047	.0015	.0018	.0049	.0019	.0004	.0004	.0053
4825	GASL	14830	673	2015	10728.2569	1349.2339	-455.9465	10808.3981	-549.6886	-13.6970	-4.5255	10822.
		14934	673	2015	-.0026	-.0113	.0033	-.0043	-.0036	.0107	.0107	.0121
4825	GAST	(s) 14830	673	2016	2258.3305	-6081.7835	-8970.2513	1301.6606	-10993.5856	-17.6057	-7.9667	11070.
	(s)	14930	673	2016	.0081	-.0102	.0057	.0064	-.0019	.0125	.0125	.0142
	(s)	14830	673	2016	.0046	.0111	.0059	.0062	.0108	-.0049	-.0050	.0134
	(s)	14930	673	2016	.0019	.0116	.0052	.0037	.0107	-.0061	-.0061	.0129
4825	IRON	(s) 14735	673	2020	3792.8447	350.2734	-318.8804	3801.7962	-395.4217	5.8649	7.0090	3822.
	(s)	14432	673	2020	-.0092	.0006	.0066	-.0090	.0065	.0022	.0022	.0113
4825	REPE	14630	673	2032	-4505.0499	-521.0204	242.2639	-4531.7363	298.3167	-1.5045	.1106	4542.
		14133	673	2032	.0139	-.0055	-.0006	.0129	-.0049	.0058	.0058	.0150
4846	PINN	(s) 14136	679	1033	1864.4982	2894.6462	3710.9780	2279.6633	4519.8529	27.4382	29.4520	5062.
	(s)	14530	679	1033	-.0023	-.0184	-.0003	-.0050	-.0105	.0144	.0144	.0185
4846	1480	(s) 14836	679	2025	-1001.9619	6064.5462	8782.2684	-76.0314	10719.3305	32.5548	41.5934	10720.
	(s)	14933	679	2025	.0016	-.0101	-.0044	.0001	-.0095	.0058	.0058	.0111
2594	CHME	(s) 14830	713	2008	7321.9675	221.8270	-1241.1885	7266.0196	-1550.5285	42.2383	46.5615	7430.
	(s)	14930	713	2008	.0057	-.0233	-.0083	.0020	-.0206	.0147	.0147	.0254
	(s)	17630	713	2008	.0094	-.0066	-.0092	.0082	-.0121	.0012	.0012	.0147
2594	7830	(s) 14831	713	2022	11523.2092	4981.8424	4436.9407	12162.3612	5419.0360	23.8026	37.6954	13315.
	(s)	14936	713	2022	-.0022	-.0002	-.0039	-.0022	-.0031	-.0024	-.0024	.0045
2594	MADO	(s) 14334	713	2024	-5043.9332	-834.5165	-69.4972	-5112.3995	-75.4576	-13.6853	-11.6382	5113.
	(s)	14731	713	2024	-.0016	-.0012	.0154	-.0018	.0120	.0097	.0097	.0155
2594	WIND	(s) 14335	713	2040	-4635.9882	1441.9625	3041.0794	-4352.1720	3725.3732	.5391	3.1139	5729.
	(s)	14732	713	2040	-.0092	-.0041	.0088	-.0097	.0057	.0072	.0072	.0134
0787	1487	17631	723	760	3814.0177	-901.2305	-2097.5184	3632.2810	-2562.2173	-10.4026	-8.8531	4445.
		17533	723	760	-.0042	.0097	-.0058	-.0027	.0012	-.0117	-.0117	.0121
0787	HUBB	14534	723	2019	-983.1030	2854.2491	4220.6069	-536.9602	5161.2261	13.0802	15.1980	5189.
	(s)	14131	723	2019	.0027	-.0187	-.0149	-.0002	-.0231	.0068	.0068	.0241
0787	ORCH	14130	723	2027	-1896.4283	-2935.7239	-3682.4961	-2321.3914	-4515.1749	5.5237	7.5492	5077.
	(s)	14533	723	2027	.0045	-.0029	.0031	.0040	.0005	.0047	.0047	.0062

1487	3199	17631	760	2009	-1306.0650	-2137.8276	-2732.8904	-1617.7350	-3335.7885	-15.8438	-14.7636	3707.
	(s)	14036	760	2009	.0167	-.0014	-.0291	.0163	-.0260	-.0136	-.0136	.0336
4843	ANTH	(s) 14535	792	2001	601.0152	2408.2063	3176.0619	956.9193	3915.5386	-30.1449	-28.8673	4031.
	(s)	14132	792	2001	-.0087	-.0043	.0096	-.0092	.0061	.0080	.0080	.0137
4843	DUKE	14434	792	2013	159.2631	-3410.6426	-4799.6782	-356.3191	-5879.4334	-7.6490	-4.9201	5890.
	(s)	14031	792	2013	-.0007	-.0034	-.0009	-.0012	-.0026	.0021	.0021	.0036
4843	4800	17534	792	2014	-6893.7571	-1502.7586	-657.0887	-7041.4639	-794.6580	-15.4980	-11.5658	7086.
		14031	792	2014	-.0026	-.0057	.0075	-.0034	.0031	.0086	.0086	.0098
	(s)	14434	792	2014	.0016	.0036	-.0025	.0021	-.0001	-.0042	-.0042	.0047
4843	4839	(s) 17534	792	2038	-1532.7724	-1689.3664	-2009.1341	-1769.7615	-2471.3937	11.2836	12.0093	3040.
	(s)	17632	792	2038	-.0067	.0162	-.0030	-.0042	.0074	-.0156	-.0156	.0178
SUNN	CHAP	(s) 14933	1005	2007	-40.7628	5465.5469	7618.6693	786.2310	9343.4347	-7.4880	-.5730	9376.
	(s)	14932	1005	2007	.0048	.0031	-.0019	.0052	-.0002	-.0030	-.0030	.0060
	(s)	14836	1005	2007	-.0072	.0122	-.0017	-.0053	.0062	-.0117	-.0117	.0143
SUNN	DUKE	14031	1005	2013	-3162.7285	-2207.8445	-2371.3440	-3460.2357	-2920.1203	19.1712	20.7795	4528.
	(s)	14434	1005	2013	.0017	.0135	-.0087	.0037	.0005	-.0157	-.0157	.0162
SUNN	GAST	(s) 17530	1005	2016	10338.0088	584.6755	-1439.7870	10307.5331	-1744.4776	-28.5789	-20.0200	10454.
	(s)	14930	1005	2016	.0032	.0116	-.0057	.0049	.0017	-.0123	-.0122	.0133
	(s)	14830	1005	2016	.0089	-.0027	-.0087	.0084	-.0094	-.0018	-.0017	.0127
	(s)	14930	1005	2016	.0026	-.0026	-.0003	.0022	-.0020	.0022	.0022	.0037
SUNN	KINL	(s) 14534	1005	2021	1008.8480	2729.4728	3614.7691	1410.0091	4421.0911	13.3978	15.0909	4641.
	(s)	14131	1005	2021	-.0061	-.0061	-.0032	-.0070	-.0056	.0023	.0023	.0092
SUNN	1480	14836	1005	2025	-1657.8377	-4818.7385	-6303.6435	-2367.4833	-7752.3071	36.6757	41.8417	8106.
	(s)	14931	1005	2025	.0003	-.0062	.0051	-.0006	.0006	.0080	.0080	.0080
	(s)	14933	1005	2025	.0026	.0003	-.0132	.0026	-.0108	-.0076	-.0075	.0135
SUNN	5066	17633	1005	2029	-14094.0357	-1144.5486	1400.6075	-14105.0302	1720.9369	-5.9629	9.8490	14210.
		14833	1005	2029	.0115	-.0076	-.0004	.0102	-.0057	.0073	.0073	.0138
		17530	1005	2029	-.0036	-.0129	.0004	-.0055	-.0067	.0102	.0102	.0134
PUET	FRID	14630	1011	1012	4391.4393	521.1711	-327.7081	4419.5695	-356.4532	-64.0111	-62.4716	4434.
	(s)	14133	1011	1012	-.0049	.0051	.0025	-.0041	.0054	-.0033	-.0033	.0075
PUET	HUBB	(s) 14534	1011	2019	-673.4134	-2803.0802	-3748.3175	-1092.7262	-4600.7118	5.3666	7.1249	4729.
	(s)	14131	1011	2019	.0052	-.0006	-.0133	.0050	-.0116	-.0066	-.0066	.0143
PUET	KINL	14131	1011	2021	-4643.3276	-1135.4380	-562.8343	-4762.1275	-698.9173	12.2016	14.0158	4813.
		14534	1011	2021	.0043	-.0031	.0177	.0038	.0123	.0133	.0133	.0185
FRID	HOYL	14134	1012	1013	4574.5166	633.6639	-54.8284	4617.5900	-88.0045	29.2535	30.9237	4619.
		14631	1012	1013	.0068	-.0046	.0005	.0060	-.0028	.0048	.0049	.0082
FRID	CARR	14631	1012	1020	2421.8564	-2087.3467	-3369.3003	2073.3992	-4156.2518	34.2855	35.9809	4645.

		(s)	14134	1012	1020	-0.0206	-0.0010	-0.0322	-0.0205	-0.0250	-0.0204	-0.0204	0.0382
HOYL	SNAK		14735	1013	1014	4334.4608	749.6653	112.6776	4398.2110	133.9754	5.9231	7.4393	4400.
			14432	1013	1014	.0006	-0.0046	.0111	-0.0001	.0064	.0102	.0102	.0120
HOYL	DALL		14735	1013	1021	2576.3588	-1635.3642	-2824.0905	2293.5523	-3468.0111	6.6852	8.0432	4158.
			14432	1013	1021	-0.0045	-0.0136	.0056	-0.0065	-0.0028	.0136	.0136	.0154
HOYL	IRON	(s)	14432	1013	2020	-2745.6170	1996.9980	3416.5034	-2405.0566	4173.0151	23.5880	25.4106	4817.
		(s)	14735	1013	2020	.0019	.0018	.0022	.0022	.0027	.0001	.0001	.0034
SNAK	PARS		14735	1014	1022	2326.6110	-1330.8729	-2397.9449	2092.2993	-2925.1122	-21.9784	-20.9626	3596.
			14432	1014	1022	-0.0056	-0.0067	-0.0030	-0.0066	-0.0058	.0030	.0030	.0092
SNAK	GASL	(s)	14734	1014	2015	-144.6813	2246.2704	3166.7663	205.1161	3879.8159	5.2695	6.4568	3885.
		(s)	14431	1014	2015	.0053	-0.0029	-0.0035	.0048	-0.0050	.0010	.0010	.0070
CARR	DALL		14135	1020	1021	4729.0389	1085.6301	490.4023	4839.6826	600.3058	1.1513	3.0137	4877.
			14632	1020	1021	-0.0031	.0001	-0.0062	-0.0030	-0.0047	-0.0041	-0.0041	.0069
CARR	DOOL		14135	1020	1025	2954.4186	-2070.5882	-3537.1313	2601.2450	-4331.3635	-6.1460	-4.1405	5052.
		(s)	17532	1020	1025	-0.0060	-0.0058	.0119	-0.0068	.0069	.0108	.0108	.0145
		(s)	17630	1020	1025	-0.0007	-0.0052	.0156	-0.0015	.0098	.0131	.0131	.0165
CARR	GAST	(s)	14130	1020	2016	-2127.4500	-1714.0519	-1920.3524	-2365.5213	-2357.1295	4.5328	5.4080	3339.
		(s)	14130	1020	2016	.0050	-0.0097	-0.0022	.0035	-0.0078	.0072	.0072	.0111
		(s)	14630	1020	2016	-0.0042	.0027	-0.0019	-0.0037	.0004	-0.0038	-0.0038	.0053
		(s)	14630	1020	2016	-0.0023	-0.0098	.0011	-0.0038	-0.0045	.0082	.0083	.0101
DALL	PARS		14335	1021	1022	4084.7163	1054.1668	538.8285	4198.5582	676.8245	-22.9876	-21.5713	4253.
			14732	1021	1022	.0003	.0066	-0.0062	.0013	-0.0013	-0.0089	-0.0089	.0091
DALL	REDL	(s)	14732	1021	1026	3010.5022	-1943.2612	-3365.6957	2674.0089	-4125.1631	-.9755	.9229	4916.
		(s)	14335	1021	1026	-0.0032	.0017	-0.0018	-0.0029	-0.0002	-0.0028	-0.0028	.0040
PARS	GASL	(s)	14934	1022	2015	-2471.2936	3577.1581	5564.7050	-1885.6086	6805.3819	23.4827	27.4039	7062.
		(s)	14830	1022	2015	.0028	-0.0070	.0080	.0017	.0023	.0106	.0106	.0110
PARS	GAST	(s)	14830	1022	2016	-10941.2109	-3853.8482	-2949.5815	-11407.0586	-3625.0688	12.7429	23.9657	11969.
		(s)	14930	1022	2016	-0.0028	-0.0127	.0086	-0.0047	.0000	.0149	.0149	.0156
PARS	RUTL		14733	1022	2033	1561.8702	2280.7139	2816.9430	1897.2022	3460.7484	-10.3280	-9.1041	3947.
			14430	1022	2033	.0103	-0.0089	.0057	.0088	-0.0014	.0118	.0118	.0148
PARS	WIND		14335	1022	2040	4375.8991	-575.4429	-1774.4928	4233.3877	-2169.5186	-8.3423	-6.5687	4757.
			14732	1022	2040	.0125	.0058	-0.0076	.0132	-0.0040	-0.0075	-0.0075	.0157
DOOL	REDL	(s)	14334	1025	1026	4785.1199	1212.9654	661.8321	4914.8908	806.5295	6.1241	8.0668	4981.
		(s)	14731	1025	1026	.0149	-0.0088	-0.0062	.0134	-0.0114	.0054	.0054	.0184
REDL	MADO		14731	1026	2024	5042.1800	145.5461	-980.5622	5003.7679	-1168.9581	-45.9236	-43.8555	5139.
			14334	1026	2024	-0.0015	-0.0173	-0.0067	-0.0042	-0.0152	.0099	.0099	.0186

PINN	RALP	(s)	14136	1033	2030	4395.4045	825.3542	97.7104	4469.6683	166.9901	-67.2097	-65.6431	4473.
		(s)	14033	1033	2030	-.0123	-.0049	-.0044	-.0129	-.0053	-.0001	-.0001	.0140
		(s)	14530	1033	2030	-.0139	-.0105	.0016	-.0153	-.0035	.0077	.0077	.0175
PINN	5087	(s)	14435	1033	2035	-2228.2281	2355.5644	3753.2277	-1846.3898	4603.3724	-14.4761	-12.5424	4960.
		(s)	14032	1033	2035	-.0063	.0061	.0068	-.0053	.0096	-.0018	-.0018	.0111
ANTH	CHAP		14535	2001	2007	2680.2133	1854.5385	2014.2739	2929.2529	2469.7431	1.4464	2.5981	3831.
		(s)	14132	2001	2007	-.0096	-.0034	.0001	-.0100	-.0010	.0016	.0016	.0102
ANTH	KINL	(s)	14131	2001	2021	3729.8214	-881.5510	-1989.6096	3554.2049	-2452.4662	16.8217	18.2839	4318.
		(s)	14534	2001	2021	.0087	.0046	-.0112	.0093	-.0073	-.0091	-.0091	.0149
BAXT	DELM		14433	2002	2012	609.5589	-1683.4917	-2475.9725	351.9720	-3035.1678	-4.2518	-3.5175	3056.
			14030	2002	2012	.0028	-.0035	-.0168	.0022	-.0159	-.0066	-.0066	.0174
BEAM	SHOA	(s)	14535	2003	2036	3393.7560	659.8146	185.6131	3454.2994	234.7471	-9.8274	-8.8887	3462.
		(s)	14132	2003	2036	-.0074	-.0098	.0065	-.0088	.0003	.0108	.0108	.0139
BELM	CRAM	(s)	14333	2004	2010	-2755.5191	-2319.6808	-2605.4661	-3082.8642	-3202.7965	17.3548	18.9059	4445.
		(s)	14730	2004	2010	-.0078	-.0032	-.0028	-.0082	-.0034	.0000	.0000	.0089
BELM	MADO		14730	2004	2024	1807.9649	2776.9201	3463.1219	2217.9861	4248.9575	-11.5767	-9.7714	4793.
			14333	2004	2024	-.0050	.0073	-.0066	-.0038	-.0008	-.0103	-.0103	.0110
CATA	RUTL	(s)	14430	2005	2033	-4809.4134	-138.8339	858.9554	-4771.8119	1057.0338	-5.2370	-3.3661	4887.
		(s)	14733	2005	2033	-.0075	.0035	.0009	-.0069	.0034	-.0033	-.0033	.0083
CATA	WIND	(s)	14335	2005	2040	-1995.3821	-2994.9670	-3732.4905	-2439.7961	-4574.9589	-2.9677	-.8553	5185.
		(s)	14732	2005	2040	.0008	-.0066	-.0039	-.0002	-.0070	.0032	.0032	.0077
CHAN	3199		14035	2006	2009	-1589.0744	1161.0419	1959.0810	-1392.8147	2402.3321	-6.4628	-5.8569	2777.
		(s)	14532	2006	2009	-.0101	.0020	.0060	-.0097	.0069	.0006	.0006	.0119
CHAN	RALP		14532	2006	2030	-4454.8866	-1170.7892	-696.3727	-4581.5358	-843.2445	-12.8451	-11.1455	4659.
		(s)	14035	2006	2030	.0051	-.0015	-.0031	.0048	-.0038	.0001	.0001	.0062
CHAP	REPE	(s)	14630	2007	2032	3615.3964	679.8835	154.0422	3676.6513	197.8447	-12.4334	-11.3718	3682.
		(s)	14133	2007	2032	-.0005	-.0035	.0042	-.0010	.0015	.0052	.0052	.0055
CHAP	SHOA		14132	2007	2036	-4952.8170	-223.7503	737.8030	-4929.6135	907.5866	-3.2699	-1.3022	5012.
			14535	2007	2036	-.0121	-.0015	-.0005	-.0122	-.0002	-.0006	-.0006	.0122
CHME	7830		14930	2008	2022	4201.2406	4760.0122	5678.1511	4901.9684	6965.6322	-14.5491	-8.8511	8518.
			14830	2008	2022	.0003	.0048	-.0138	.0011	-.0086	-.0118	-.0118	.0146
3199	ORCH	(s)	14130	2009	2027	-4404.3734	103.3496	1147.9287	-4336.9614	1384.4925	29.5401	31.1638	4553.
		(s)	14533	2009	2027	-.0037	.0129	-.0109	-.0017	-.0012	-.0172	-.0172	.0173
CRAM	GLOV		14730	2010	2017	-1296.2103	-2615.9650	-3389.2412	-1686.0131	-4143.3912	-7.6999	-6.1269	4473.
			14333	2010	2017	-.0068	-.0109	.0067	-.0084	-.0001	.0118	.0118	.0145
CRAM	3168	(s)	14635	2010	2028	5167.8898	-254.9612	-1513.1225	5065.9169	-1843.3549	-12.5832	-10.3063	5391.

	(s)	14332	2010	2028	-0.0061	.0044	-0.0036	-0.0053	.0001	-.0064	-.0064	.0083
CRAM	SALU	14333	2010	2034	-5252.4198	70.7876	1234.1992	-5177.9718	1518.1150	-10.3551	-8.0743	5396.
		14730	2010	2034	-.0054	-.0072	.0099	-.0065	.0045	.0108	.0108	.0134
DELM	4800	14433	2012	2014	1797.1722	-2562.6180	-3993.4439	1395.1834	-4878.2247	-28.6421	-26.6179	5074.
		14030	2012	2014	.0069	-.0065	-.0127	.0059	-.0147	-.0013	-.0013	.0158
DUKE	1480	17534	2013	2025	1504.8940	-2610.8964	-3932.2929	1094.6196	-4831.7549	19.1382	21.0683	4954.
		14434	2013	2025	-.0038	-.0071	.0012	-.0048	-.0027	.0060	.0060	.0081
		14031	2013	2025	-.0016	-.0054	-.0024	-.0024	-.0049	.0028	.0028	.0061
DUKE	4839	17534	2013	2038	-1692.0340	1721.2835	2790.5464	-1413.5736	3408.0058	15.8551	16.9251	3690.
	(s)	17632	2013	2038	-.0020	.0001	.0063	-.0020	.0054	.0033	.0033	.0066
4800	4839	17632	2014	2038	5360.9761	-186.5845	-1352.0540	5273.0337	-1672.6017	21.1532	23.5505	5532.
	(s)	17534	2014	2038	.0037	-.0185	.0050	.0009	-.0068	.0183	.0183	.0195
GASL	HINE (s)	14431	2015	2018	3901.2519	657.3988	27.0336	3955.9993	48.0016	-20.8704	-19.6448	3956.
	(s)	14734	2015	2018	.0012	.0032	.0010	.0017	.0025	-.0018	-.0018	.0036
GLOV	TEAK	14331	2017	2037	3722.2355	681.2327	118.0573	3782.8099	152.5454	-11.4829	-10.3605	3786.
		14635	2017	2037	.0010	-.0122	-.0040	-.0009	-.0103	.0077	.0077	.0129
HINE	RUTL (s)	14431	2018	2033	131.9136	-1953.8337	-2774.7995	-173.9773	-3391.7245	-17.7798	-16.8726	3396.
	(s)	14734	2018	2033	-.0004	-.0094	-.0030	-.0019	-.0078	.0058	.0058	.0099
KINL	REPE (s)	14630	2021	2032	2565.7799	3415.9779	4157.9326	3053.6610	5120.0389	-29.8507	-27.0586	5962.
	(s)	14133	2021	2032	.0061	-.0033	.0106	.0055	.0062	.0095	.0096	.0127
0930	5038	17633	2023	2026	6969.5160	-1313.4595	-3335.8667	6700.3419	-4065.9372	-30.1614	-25.3455	7838.
	(s)	17530	2023	2026	.0175	-.0122	.0003	.0155	-.0082	.0121	.0121	.0213
0930	5066 (s)	17530	2023	2029	6797.9144	3860.4990	3997.1792	7292.0221	4890.6905	9.7146	15.7597	8780.
	(s)	17633	2023	2029	-.0048	.0092	-.0003	-.0034	.0054	-.0082	-.0082	.0104
MADO	WIND	14731	2024	2040	407.9396	2276.4654	3110.5825	758.0773	3801.2586	13.5843	14.7659	3876.
		14334	2024	2040	.0047	.0064	-.0010	.0056	.0024	-.0051	-.0051	.0080
1480	5038 (s)	14931	2025	2026	-12264.6179	-1499.7843	371.2175	-12350.5398	514.7250	-85.0459	-73.0806	12362.
	(s)	14834	2025	2026	.0170	-.0146	-.0062	.0146	-.0149	.0103	.0103	.0233
1480	5087	14435	2025	2035	638.2149	-814.3397	-1318.0539	508.1361	-1596.5310	-24.8980	-24.6772	1676.
	(s)	14032	2025	2035	.0062	.0152	.0047	.0084	.0120	-.0088	-.0088	.0171
5038	5066	17634	2026	2029	-171.5875	5173.9954	7333.0343	598.3082	8956.2204	34.7333	41.0706	8976.
	(s)	14930	2026	2029	-.0033	-.0177	-.0013	-.0059	-.0109	.0131	.0131	.0181
	(s)	17531	2026	2029	-.0121	-.0084	-.0024	-.0132	-.0057	.0039	.0039	.0149
ORCH	RALP	14136	2027	2030	1538.5732	-2435.1891	-3803.3814	1150.9457	-4630.0028	-38.2333	-36.4434	4771.
		14530	2027	2030	-.0012	.0027	.0006	-.0008	.0021	-.0020	-.0020	.0030
		14033	2027	2030	.0022	.0034	.0023	.0027	.0036	-.0011	-.0011	.0047

ORCH	5087	(s)	14435	2027	2035	-5085.0571	-904.9596	-147.8549	-5163.5067	-191.3252	14.5568	16.6474	5167.
		(s)	14032	2027	2035	.0016	-.0008	.0049	.0015	.0034	.0037	.0037	.0052
3168	REES	(s)	14635	2028	2031	997.0082	-2146.1741	-3240.0215	650.0989	-3959.1821	-8.7455	-7.4794	4012.
		(s)	14332	2028	2031	.0005	-.0033	.0000	.0000	-.0019	.0027	.0027	.0033
3168	TEAK		14635	2028	2037	-2741.8622	-1679.7740	-1758.0647	-2970.2843	-2146.5320	-7.2337	-6.1804	3665.
			14332	2028	2037	-.0054	-.0110	.0081	-.0070	.0008	.0129	.0129	.0147

EAST Components

* = (1)
millimeters
-> -50.00 (0)
-50.00-> -45.00 (0)
-45.00-> -40.00 (0)
-40.00-> -35.00 (0)
-35.00-> -30.00 (0)
-30.00-> -25.00 (1) *
-25.00-> -20.00 (1) *
-20.00-> -15.00 (7) ****
-15.00-> -10.00 (7) ****
-10.00-> -5.00 (30) *****
-5.00-> 5.00 (97) *****
5.00-> 10.00 (22) *****
10.00-> 15.00 (8) ****
15.00-> 20.00 (3) **
20.00-> 25.00 (0)
25.00-> 30.00 (1) *
30.00-> 35.00 (1) *
35.00-> 40.00 (0)
40.00-> 45.00 (1) *
45.00-> 50.00 (0)
50.00-> (0)

Total - 179
RMS = 8.50 mm; MEAN = -.34 mm;

NORTH Components

* = (1)
millimeters
-> -50.00 (0)
-50.00-> -45.00 (0)
-45.00-> -40.00 (0)
-40.00-> -35.00 (0)
-35.00-> -30.00 (0)
-30.00-> -25.00 (2) *
-25.00-> -20.00 (2) *

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-20.00-> -15.00 ( 5) ***
-15.00-> -10.00 ( 15) *****
-10.00-> -5.00 ( 31) *****
-5.00-> 5.00 ( 85) *****
5.00-> 10.00 ( 27) *****
10.00-> 15.00 ( 9) *****
15.00-> 20.00 ( 2) *
20.00-> 25.00 ( 1) *
25.00-> 30.00 ( 0)
30.00-> 35.00 ( 0)
35.00-> 40.00 ( 0)
40.00-> 45.00 ( 0)
45.00-> 50.00 ( 0)
50.00-> ( 0)

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Total - 179
RMS = 7.93 mm; MEAN = -1.43 mm;

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UP Components

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* = ( 1)
millimeters
-> -50.00 ( 0)
-50.00-> -45.00 ( 0)
-45.00-> -40.00 ( 0)
-40.00-> -35.00 ( 0)
-35.00-> -30.00 ( 0)
-30.00-> -25.00 ( 0)
-25.00-> -20.00 ( 1) *
-20.00-> -15.00 ( 4) ***
-15.00-> -10.00 ( 15) *****
-10.00-> -5.00 ( 23) *****
-5.00-> 5.00 ( 66) *****
5.00-> 10.00 ( 35) *****
10.00-> 15.00 ( 30) *****
15.00-> 20.00 ( 5) ****
20.00-> 25.00 ( 0)
25.00-> 30.00 ( 0)
30.00-> 35.00 ( 0)
35.00-> 40.00 ( 0)
40.00-> 45.00 ( 0)
45.00-> 50.00 ( 0)
50.00-> ( 0)

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Total - 179
RMS = 8.65 mm; MEAN = 1.38 mm;

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OBS#	Residuals in Meters			DISTANCE	From Station	To Station
	DN	DE	DU			
4	0.0014	-0.0098	-0.0075	2676.4650	(2003) BEAM	(637) ROBINSON
7	-0.0017	0.0004	-0.0026	2157.9905	(637) ROBINSON	(2002) BAXTER
10	0.0058	-0.0010	0.0030	3055.5210	(2002) BAXTER	(2012) DELMAC
13	-0.0010	0.0051	0.0048	6020.9861	(2014) FISHCAMP AZ MK	(525) BANK
16	0.0048	-0.0026	-0.0010	5073.9076	(2012) DELMAC	(2014) FISHCAMP AZ MK
19	0.0006	-0.0014	0.0048	4954.2352	(2013) DUKECO	(2025) N 251
22	-0.0010	0.0041	-0.0116	4527.7674	(1005) SUNNYSIDE	(2013) DUKECO
25	-0.0008	0.0034	-0.0013	7086.1790	(792) WHITERSPOONS	(2014) FISHCAMP AZ MK
28	-0.0009	0.0028	-0.0022	5890.2277	(2013) DUKECO	(792) WHITERSPOONS
31	0.0038	0.0006	0.0012	5167.0698	(2035) SHEAR	(2027) ORCHARD
34	-0.0011	-0.0005	0.0011	4959.8910	(2035) SHEAR	(1033) PINNACLE
37	0.0015	-0.0016	0.0066	4881.8760	(660) M 40	(1005) SUNNYSIDE
40	-0.0015	-0.0022	0.0002	4771.0633	(2027) ORCHARD	(2030) RALPH
43	0.0119	0.0004	-0.0145	1675.6316	(2035) SHEAR	(2025) N 251
46	0.0025	0.0000	-0.0050	3464.8044	(1035) HAVEN	(172) NEARLY
49	-0.0015	0.0307	-0.0032	4575.4451	(1035) HAVEN	(111) GASPORT
52	-0.0013	-0.0030	-0.0056	4171.2996	(133) J 222 1982	(1035) HAVEN
55	-0.0002	-0.0025	-0.0037	4473.2810	(2030) RALPH	(1033) PINNACLE
58	-0.0015	0.0022	-0.0013	4658.5058	(2030) RALPH	(2006) CHANTILLY
61	0.0041	-0.0024	0.0035	4815.5684	(148) L 222	(2034) SALUDA
64	0.0046	0.0006	0.0013	2737.5479	(2006) CHANTILLY	(148) L 222
67	-0.0156	0.0140	-0.0147	3707.4068	(2009) COLE NCGS 1964	(760) T 251
70	0.0015	0.0120	0.0017	2637.2512	(2011) CRAWFORD	(133) J 222 1982
73	0.0018	0.0088	0.0040	4548.3053	(2006) CHANTILLY	(133) J 222 1982
76	0.0021	-0.0043	0.0033	2776.9040	(2006) CHANTILLY	(2009) COLE NCGS 1964
79	0.0028	0.0021	-0.0034	4862.0958	(2027) ORCHARD	(660) M 40
82	0.0015	0.0042	0.0098	4552.6869	(2027) ORCHARD	(2009) COLE NCGS 1964
85	-0.0020	-0.0001	0.0035	2148.4870	(2016) GASTON CORS ARP	(554) COMB
88	0.0033	0.0039	-0.0142	5076.9720	(723) RV 76	(2027) ORCHARD
91	0.0032	-0.0037	0.0075	4837.3254	(554) COMB	(723) RV 76
94	-0.0132	-0.0004	-0.0035	5189.0895	(2019) HUB	(723) RV 76
97	-0.0033	0.0022	0.0000	4728.7101	(2019) HUB	(1011) PUETTS
100	-0.0029	-0.0066	-0.0030	4640.5094	(2021) KINLEY	(1005) SUNNYSIDE
103	0.0114	-0.0027	0.0072	4318.2544	(2021) KINLEY	(2001) ANTHONY
106	0.0102	-0.0051	0.0033	4813.1619	(1011) PUETTS	(2021) KINLEY
109	0.0015	-0.0040	0.0047	4030.8897	(2001) ANTHONY	(792) WHITERSPOONS
112	-0.0014	-0.0057	0.0000	3831.4660	(2007) CHAPEL	(2001) ANTHONY
115	0.0010	-0.0084	-0.0094	5012.4742	(2007) CHAPEL	(2036) SHOALS
118	-0.0018	0.0015	0.0090	3771.0948	(2003) BEAM	(525) BANK
121	0.0008	-0.0076	-0.0077	3462.2794	(2036) SHOALS	(2003) BEAM
124	0.0012	-0.0041	0.0000	4434.3825	(1012) FRIDAY	(1011) PUETTS
127	0.0039	-0.0029	-0.0033	4754.3384	(1012) FRIDAY	(673) NORTH
130	0.0013	-0.0028	0.0037	3681.9933	(2032) REPENTER	(2007) CHAPEL
133	0.0034	0.0032	-0.0018	5961.5919	(2032) REPENTER	(2021) KINLEY
136	0.0029	-0.0100	-0.0066	4541.5417	(673) NORTH	(2032) REPENTER
139	0.0021	-0.0039	-0.0067	4914.4582	(604) GAS 5	(2019) HUB
142	0.0024	0.0012	-0.0033	3339.4293	(2016) GASTON CORS ARP	(1020) CARR
145	-0.0034	0.0068	0.0024	4618.5281	(1012) FRIDAY	(1013) HOYLE
148	-0.0061	-0.0052	-0.0087	4644.8555	(1020) CARR	(1012) FRIDAY
151	-0.0027	0.0018	0.0042	5158.8339	(604) GAS 5	(1012) FRIDAY
154	0.0006	-0.0010	0.0060	2148.4870	(2016) GASTON CORS ARP	(554) COMB
157	0.0011	0.0001	0.0052	3578.4235	(604) GAS 5	(554) COMB
160	-0.0005	-0.0014	-0.0003	1452.5061	(2016) GASTON CORS ARP	(604) GAS 5
163	0.0002	0.0023	-0.0010	4876.7734	(1020) CARR	(1021) DALLAS
166	-0.0053	0.0047	0.0038	3339.4293	(2016) GASTON CORS ARP	(1020) CARR
169	-0.0044	-0.0083	-0.0115	4865.0060	(1025) DOOLEY	(620) GROVES NCGS 1964
172	0.0054	-0.0018	0.0112	5052.4416	(1020) CARR	(1025) DOOLEY
175	-0.0064	-0.0005	0.0006	2148.4870	(2016) GASTON CORS ARP	(554) COMB
178	0.0000	0.0012	0.0047	3310.0259	(554) COMB	(263) TANK NCGS 1965
181	0.0021	0.0005	-0.0009	4771.0633	(2027) ORCHARD	(2030) RALPH
184	0.0052	0.0104	-0.0036	4473.2810	(2030) RALPH	(1033) PINNACLE
187	-0.0084	-0.0041	-0.0048	4217.8627	(594) FURGUSSON	(2011) CRAWFORD
190	-0.0063	-0.0037	0.0083	5258.3006	(679) YORK	(594) FURGUSSON
193	0.0034	0.0037	-0.0093	5062.2762	(1033) PINNACLE	(679) YORK
196	-0.0068	-0.0008	0.0039	3825.0359	(760) T 251	(263) TANK NCGS 1965
199	-0.0004	-0.0009	-0.0028	4091.2950	(2034) SALUDA	(111) GASPORT
202	-0.0025	-0.0019	0.0003	4360.3038	(263) TANK NCGS 1965	(2034) SALUDA
205	0.0122	0.0181	0.0079	4552.9862	(620) GROVES NCGS 1964	(2004) BELMONT
208	-0.0075	-0.0141	-0.0095	4671.9214	(2034) SALUDA	(620) GROVES NCGS 1964

211	-0.0083	0.0018	0.0063	3785.9033	(2017) GLOVER	(2037) TEAK
214	-0.0076	0.0048	0.0016	4820.8867	(111) GASPORT	(2017) GLOVER
217	-0.0027	0.0033	0.0002	2932.6835	(2039) WILLOW	(172) NEARLY
220	-0.0036	0.0025	0.0035	2623.9720	(299) WYLIE AZ MK	(2039) WILLOW
223	0.0047	-0.0031	-0.0052	3527.4595	(299) WYLIE AZ MK	(2031) REESE
226	0.0011	0.0024	-0.0086	3664.7319	(2028) POINT NCGS 1965	(2037) TEAK
229	0.0048	-0.0033	-0.0128	5390.8836	(2028) POINT NCGS 1965	(2010) CRAMER
232	0.0023	-0.0002	-0.0001	4012.2141	(2031) REESE	(2028) POINT NCGS 1965
235	0.0012	0.0019	-0.0066	4473.2989	(2010) CRAMER	(2017) GLOVER
238	0.0029	-0.0023	0.0028	5395.9434	(2010) CRAMER	(2034) SALUDA
241	-0.0106	0.0034	-0.0012	2703.7704	(2004) BELMONT	(239) RV 95
244	0.0061	0.0042	0.0008	4793.0452	(2004) BELMONT	(2024) MADORA
247	0.0012	0.0057	0.0001	4445.4809	(2010) CRAMER	(2004) BELMONT
250	0.0045	-0.0042	0.0022	4980.6339	(1026) REDLAIR	(1025) DOOLEY
253	-0.0097	0.0006	-0.0252	4712.9429	(620) GROVES NCGS 1964	(1026) REDLAIR
256	-0.0026	0.0024	-0.0013	5112.9770	(2024) MADORA	(713) RHYNE
259	0.0009	-0.0009	-0.0022	3876.1405	(2024) MADORA	(2040) WINDERMERE
262	0.0010	0.0048	0.0087	5138.7063	(1026) REDLAIR	(2024) MADORA
265	-0.0011	-0.0017	-0.0025	4916.0230	(1026) REDLAIR	(1021) DALLAS
268	-0.0031	0.0043	-0.0054	4252.8277	(1021) DALLAS	(1022) PARSON
271	-0.0035	0.0051	-0.0077	5728.8635	(2040) WINDERMERE	(713) RHYNE
274	0.0066	0.0019	-0.0050	5184.8753	(2040) WINDERMERE	(2005) CATAWBA
277	-0.0014	0.0104	-0.0106	4756.9472	(1022) PARSON	(2040) WINDERMERE
280	0.0034	-0.0065	-0.0071	3946.6803	(1022) PARSON	(2033) RUTLEDGE
283	-0.0019	0.0039	0.0045	4887.4920	(2033) RUTLEDGE	(2005) CATAWBA
286	-0.0013	0.0031	-0.0132	5982.0202	(93) FROGLEVEL	(2018) HINES
289	0.0095	-0.0019	-0.0129	4042.5559	(2005) CATAWBA	(93) FROGLEVEL
292	0.0064	0.0020	-0.0046	3396.2367	(2033) RUTLEDGE	(2018) HINES
295	-0.0056	0.0035	0.0029	3885.2384	(2015) GASLIN	(1014) SNAKE
298	-0.0029	-0.0026	-0.0003	3956.3482	(2018) HINES	(2015) GASLIN
301	-0.0038	-0.0012	0.0058	3639.1998	(301) ALEXIS RM 2	(2020) IRON
304	-0.0037	0.0013	0.0048	3370.7832	(2015) GASLIN	(301) ALEXIS RM 2
307	0.0067	-0.0116	0.0067	3822.3117	(2020) IRON	(673) NORTH
310	-0.0065	0.0039	-0.0010	4157.8337	(1013) HOYLE	(1021) DALLAS
313	-0.0033	0.0018	-0.0047	4816.5283	(2020) IRON	(1013) HOYLE
316	-0.0008	0.0083	0.0016	3596.4603	(1014) SNAKE	(1022) PARSON
319	-0.0024	0.0049	-0.0122	4400.2599	(1013) HOYLE	(1014) SNAKE
322	-0.0003	0.0006	-0.0005	2157.9905	(637) ROBINSON	(2002) BAXTER
325	-0.0101	0.0012	-0.0035	3055.5210	(2002) BAXTER	(2012) DELMAC
328	-0.0003	-0.0029	-0.0074	6020.9861	(2014) FISHCAMP AZ MK	(525) BANK
331	-0.0098	0.0033	-0.0023	5073.9076	(2012) DELMAC	(2014) FISHCAMP AZ MK
334	-0.0043	-0.0048	0.0068	2676.4650	(2003) BEAM	(637) ROBINSON
337	-0.0024	0.0021	-0.0114	7086.1790	(2014) FISHCAMP AZ MK	(792) WHITERSPOONS
340	0.0014	-0.0004	-0.0041	4527.7674	(2013) DUKECO	(1005) SUNNYSIDE
343	-0.0015	0.0010	0.0016	4954.2352	(2013) DUKECO	(2025) N 251
346	-0.0018	-0.0040	0.0044	5890.2277	(792) WHITERSPOONS	(2013) DUKECO
349	0.0023	-0.0049	-0.0115	4881.8760	(1005) SUNNYSIDE	(660) M 40
352	0.0004	-0.0008	-0.0025	5167.0698	(2035) SHEAR	(2027) ORCHARD
355	-0.0107	0.0048	0.0029	4959.8910	(2035) SHEAR	(1033) PINNACLE
358	0.0000	0.0080	0.0057	1675.6316	(2025) N 251	(2035) SHEAR
361	0.0000	0.0013	0.0011	4771.0633	(2027) ORCHARD	(2030) RALPH
364	0.0017	-0.0050	0.0040	4473.2810	(2030) RALPH	(1033) PINNACLE
367	-0.0071	-0.0014	0.0051	5062.2762	(1033) PINNACLE	(679) YORK
370	0.0017	0.0002	0.0003	4217.8627	(594) FURGUSSON	(2011) CRAWFORD
373	-0.0007	0.0007	-0.0057	5258.3006	(679) YORK	(594) FURGUSSON
376	-0.0052	-0.0005	0.0077	3464.8044	(1035) HAVEN	(172) NEARLY
379	-0.0170	0.0103	0.0086	4575.4451	(111) GASPORT	(1035) HAVEN
382	-0.0035	0.0179	0.0031	2637.2512	(133) J 222 1982	(2011) CRAWFORD
385	0.0072	0.0227	0.0100	4548.3053	(133) J 222 1982	(2006) CHANTILLY
388	0.0078	-0.0234	-0.0073	4171.2996	(1035) HAVEN	(133) J 222 1982
391	-0.0023	0.0027	0.0014	4658.5058	(2006) CHANTILLY	(2030) RALPH
394	0.0037	-0.0059	-0.0055	4815.5684	(148) L 222	(2034) SALUDA
397	-0.0007	0.0035	-0.0012	2737.5479	(2006) CHANTILLY	(148) L 222
400	0.0049	-0.0054	-0.0027	2776.9040	(2009) COLE NCGS 1964	(2006) CHANTILLY
403	0.0003	0.0025	-0.0074	4552.6869	(2027) ORCHARD	(2009) COLE NCGS 1964
406	0.0091	-0.0079	0.0058	4862.0958	(2027) ORCHARD	(660) M 40
409	0.0036	0.0009	0.0025	2148.4870	(2016) GASTON CORS ARP	(554) COMB
412	0.0060	-0.0028	-0.0076	4837.3254	(723) RV 76	(554) COMB
415	-0.0028	0.0002	0.0188	5076.9720	(2027) ORCHARD	(723) RV 76
418	0.0084	-0.0029	0.0066	4728.7101	(2019) HUB	(1011) PUETTS
421	0.0027	0.0003	-0.0053	4640.5094	(2021) KINLEY	(1005) SUNNYSIDE
424	0.0042	0.0066	-0.0019	4318.2544	(2021) KINLEY	(2001) ANTHONY

427	-0.0021	-0.0089	-0.0100	4813.1619	(1011)	PUETTS	(2021)	KINLEY
430	-0.0099	0.0002	0.0103	5189.0895	(723)	RV 76	(2019)	HUB
433	-0.0046	0.0053	-0.0032	4030.8897	(2001)	ANTHONY	(792)	WHITERSPOONS
436	0.0003	-0.0043	0.0016	3831.4660	(2001)	ANTHONY	(2007)	CHAPEL
439	0.0012	0.0038	-0.0088	5012.4742	(2007)	CHAPEL	(2036)	SHOALS
442	0.0070	-0.0019	0.0111	3771.0948	(2003)	BEAM	(525)	BANK
445	0.0005	0.0012	-0.0185	3462.2794	(2036)	SHOALS	(2003)	BEAM
448	0.0042	0.0000	-0.0033	4434.3825	(1011)	PUETTS	(1012)	FRIDAY
451	0.0026	-0.0057	0.0054	4754.3384	(1012)	FRIDAY	(673)	NORTH
454	-0.0002	-0.0018	-0.0015	3681.9933	(2032)	REPENTER	(2007)	CHAPEL
457	-0.0028	-0.0023	-0.0114	5961.5919	(2032)	REPENTER	(2021)	KINLEY
460	-0.0020	0.0029	-0.0008	4541.5417	(673)	NORTH	(2032)	REPENTER
463	-0.0006	0.0007	-0.0024	4618.5281	(1012)	FRIDAY	(1013)	HOYLE
466	-0.0189	-0.0153	-0.0117	4644.8555	(1012)	FRIDAY	(1020)	CARR
469	-0.0021	-0.0025	0.0049	3339.4293	(2016)	GASTON CORS ARP	(1020)	CARR
472	0.0001	-0.0015	0.0050	4914.4582	(2019)	HUB	(604)	GAS 5
475	0.0016	-0.0037	-0.0071	5158.8339	(1012)	FRIDAY	(604)	GAS 5
478	0.0011	-0.0029	0.0065	1452.5061	(2016)	GASTON CORS ARP	(604)	GAS 5
481	0.0054	0.0002	-0.0030	2148.4870	(2016)	GASTON CORS ARP	(554)	COMB
484	0.0032	0.0025	-0.0077	3578.4235	(604)	GAS 5	(554)	COMB
487	0.0028	-0.0025	-0.0071	3339.4293	(2016)	GASTON CORS ARP	(1020)	CARR
490	-0.0024	-0.0028	-0.0047	3310.0259	(554)	COMB	(263)	TANK NCGS 1965
493	-0.0011	-0.0012	-0.0111	2148.4870	(2016)	GASTON CORS ARP	(554)	COMB
496	0.0050	0.0053	0.0030	4876.7734	(1020)	CARR	(1021)	DALLAS
499	0.0026	0.0017	-0.0097	3825.0359	(760)	T 251	(263)	TANK NCGS 1965
502	0.0020	-0.0030	0.0035	4091.2950	(2034)	SALUDA	(111)	GASPORT
505	0.0007	0.0003	0.0017	4360.3038	(263)	TANK NCGS 1965	(2034)	SALUDA
508	-0.0085	0.0022	0.0023	4552.9862	(620)	GROVES NCGS 1964	(2004)	BELMONT
511	0.0038	0.0018	-0.0007	4671.9214	(2034)	SALUDA	(620)	GROVES NCGS 1964
514	0.0020	0.0027	-0.0014	3785.9033	(2017)	GLOVER	(2037)	TEAK
517	-0.0017	-0.0024	0.0040	2932.6835	(2039)	WILLOW	(172)	NEARLY
520	0.0027	0.0003	-0.0066	2623.9720	(2039)	WILLOW	(299)	WYLIE AZ MK
523	-0.0025	-0.0020	-0.0105	3615.7602	(2037)	TEAK	(299)	WYLIE AZ MK
526	0.0028	0.0040	0.0063	4820.8867	(111)	GASPORT	(2017)	GLOVER
529	0.0010	0.0026	-0.0011	3527.4595	(299)	WYLIE AZ MK	(2031)	REESE
532	0.0047	0.0020	-0.0064	5390.8836	(2028)	POINT NCGS 1965	(2010)	CRAMER
535	0.0042	-0.0002	-0.0028	4012.2141	(2031)	REESE	(2028)	POINT NCGS 1965
538	0.0019	-0.0047	0.0043	3664.7319	(2028)	POINT NCGS 1965	(2037)	TEAK
541	0.0010	-0.0066	0.0052	4473.2989	(2010)	CRAMER	(2017)	GLOVER
544	-0.0016	0.0041	-0.0081	5395.9434	(2010)	CRAMER	(2034)	SALUDA
547	-0.0064	0.0013	0.0109	2703.7704	(2004)	BELMONT	(239)	RV 95
550	0.0053	0.0004	-0.0095	4793.0452	(2004)	BELMONT	(2024)	MADORA
553	-0.0022	-0.0025	0.0001	4445.4809	(2010)	CRAMER	(2004)	BELMONT
556	-0.0069	0.0091	0.0076	4980.6339	(1026)	REDLAIR	(1025)	DOOLEY
559	0.0080	-0.0035	-0.0161	4712.9429	(620)	GROVES NCGS 1964	(1026)	REDLAIR
562	0.0094	0.0007	0.0083	5112.9770	(2024)	MADORA	(713)	RHYNE
565	0.0033	0.0048	-0.0073	3876.1405	(2024)	MADORA	(2040)	WINDERMERE
568	-0.0142	0.0006	0.0186	5138.7063	(1026)	REDLAIR	(2024)	MADORA
571	-0.0009	0.0011	0.0003	4916.0230	(1026)	REDLAIR	(1021)	DALLAS
574	-0.0018	0.0030	0.0035	4252.8277	(1021)	DALLAS	(1022)	PARSON
577	0.0022	-0.0046	-0.0005	5728.8635	(2040)	WINDERMERE	(713)	RHYNE
580	-0.0004	0.0016	-0.0018	5184.8753	(2040)	WINDERMERE	(2005)	CATAWBA
583	0.0026	-0.0029	-0.0031	4756.9472	(1022)	PARSON	(2040)	WINDERMERE
586	0.0020	0.0023	0.0046	3946.6803	(1022)	PARSON	(2033)	RUTLEDGE
589	0.0015	-0.0029	0.0012	4887.4920	(2033)	RUTLEDGE	(2005)	CATAWBA
592	-0.0026	-0.0061	0.0037	5982.0202	(93)	FROGLEVEL	(2018)	HINES
595	0.0030	0.0040	-0.0019	4042.5559	(2005)	CATAWBA	(93)	FROGLEVEL
598	-0.0014	0.0002	0.0012	3396.2367	(2033)	RUTLEDGE	(2018)	HINES
601	-0.0006	-0.0013	0.0019	3885.2384	(2015)	GASLIN	(1014)	SNAKE
604	-0.0004	-0.0009	-0.0021	3956.3482	(2018)	HINES	(2015)	GASLIN
607	-0.0001	-0.0044	0.0079	3639.1998	(301)	ALEXIS RM 2	(2020)	IRON
610	0.0000	-0.0057	0.0092	3370.7832	(2015)	GASLIN	(301)	ALEXIS RM 2
613	0.0001	-0.0026	0.0045	3822.3117	(2020)	IRON	(673)	NORTH
616	-0.0093	-0.0026	0.0126	4157.8337	(1013)	HOYLE	(1021)	DALLAS
619	-0.0006	0.0039	-0.0047	4816.5283	(2020)	IRON	(1013)	HOYLE
622	-0.0065	0.0017	0.0045	3596.4603	(1014)	SNAKE	(1022)	PARSON
625	0.0040	0.0048	-0.0020	4400.2599	(1013)	HOYLE	(1014)	SNAKE
628	0.0059	0.0031	0.0308	3577.5028	(2028)	POINT NCGS 1965	(239)	RV 95
631	0.0051	0.0071	0.0054	4865.0060	(1025)	DOOLEY	(620)	GROVES NCGS 1964
634	0.0016	-0.0050	-0.0004	5052.4416	(1025)	DOOLEY	(1020)	CARR
637	0.0002	-0.0122	-0.0029	4879.1215	(1025)	DOOLEY	(554)	COMB
640	-0.0025	0.0103	0.0066	3615.7602	(2037)	TEAK	(299)	WYLIE AZ MK

643	-0.0071	-0.0015	0.0085	4445.0570	(723) RV 76	(760) T 251
646	-0.0051	0.0029	0.0073	3039.7294	(2038) WARLICK AZ MK	(792) WHITERSPOONS
649	0.0038	-0.0007	-0.0122	4905.3721	(660) M 40	(2025) N 251
652	-0.0043	-0.0038	0.0076	4954.2352	(2013) DUKECO	(2025) N 251
655	-0.0026	-0.0012	0.0081	5531.9947	(2038) WARLICK AZ MK	(2014) FISHCAMP AZ MK
658	0.0023	0.0000	0.0073	7086.1790	(792) WHITERSPOONS	(2014) FISHCAMP AZ MK
661	0.0010	-0.0015	-0.0073	3689.5739	(2013) DUKECO	(2038) WARLICK AZ MK
664	0.0044	0.0003	0.0019	5052.4416	(1025) DOOLEY	(1020) CARR
667	0.0001	0.0034	0.0084	4879.1215	(1025) DOOLEY	(554) COMB
670	0.0095	0.0000	-0.0225	3577.5028	(239) RV 95	(2028) POINT NCGS 1965
673	-0.0002	0.0033	-0.0036	3615.7602	(2037) TEAK	(299) WYLIE AZ MK
676	-0.0105	0.0023	0.0011	3707.4068	(760) T 251	(2009) COLE NCGS 1964
679	-0.0060	-0.0041	-0.0032	4445.0570	(723) RV 76	(760) T 251
682	0.0023	-0.0013	-0.0083	3039.7294	(2038) WARLICK AZ MK	(792) WHITERSPOONS
685	0.0044	-0.0005	0.0106	3689.5739	(2038) WARLICK AZ MK	(2013) DUKECO
688	-0.0042	0.0021	0.0102	5531.9947	(2014) FISHCAMP AZ MK	(2038) WARLICK AZ MK
691	0.0021	-0.0009	0.0273	4905.3721	(2025) N 251	(660) M 40
694	0.0008	0.0049	-0.0155	11070.3812	(2016) GASTON CORS ARP	(673) NORTH
697	-0.0013	0.0031	0.0014	7061.8233	(2015) GASLIN	(1022) PARSON
700	-0.0051	-0.0085	0.0071	10822.3674	(673) NORTH	(2015) GASLIN
703	0.0093	0.0017	-0.0027	12122.2848	(93) FROGLEVEL	(713) RHYNE
706	0.0016	-0.0012	-0.0007	14373.3073	(93) FROGLEVEL	(2022) LAKEVIEW
709	0.0020	-0.0019	-0.0003	8517.5959	(2008) CHARLOTTE CORS ARP	(2022) LAKEVIEW
712	0.0017	-0.0061	-0.0061	9921.7010	(2015) GASLIN	(93) FROGLEVEL
715	-0.0063	0.0025	0.0009	7710.1133	(713) RHYNE	(239) RV 95
718	-0.0001	-0.0022	-0.0015	9460.4588	(299) WYLIE AZ MK	(499) PRODUCE
721	0.0045	0.0109	0.0039	13005.6990	(299) WYLIE AZ MK	(133) J 222 1982
724	0.0058	0.0016	0.0133	9665.7475	(239) RV 95	(299) WYLIE AZ MK
727	0.0126	-0.0030	-0.0001	7429.7407	(2008) CHARLOTTE CORS ARP	(713) RHYNE
730	0.0030	-0.0005	-0.0031	13315.0114	(2022) LAKEVIEW	(713) RHYNE
733	0.0025	0.0041	-0.0041	7852.5117	(217) CLT E	(239) RV 95
736	-0.0120	-0.0025	0.0087	7149.0554	(239) RV 95	(620) GROVES NCGS 1964
739	-0.0034	0.0047	0.0036	12000.0020	(1022) PARSON	(604) GAS 5
742	0.0149	0.0103	-0.0137	9747.9628	(620) GROVES NCGS 1964	(1022) PARSON
745	0.0018	0.0023	-0.0099	11969.2247	(2016) GASTON CORS ARP	(1022) PARSON
748	-0.0016	-0.0018	-0.0006	8474.1701	(2008) CHARLOTTE CORS ARP	(217) CLT E
751	-0.0027	-0.0034	0.0102	11200.7336	(499) PRODUCE	(217) CLT E
754	-0.0013	-0.0088	-0.0006	14209.6261	(1005) SUNNYSIDE	(2029) PULLOFF
757	-0.0011	0.0088	-0.0034	9925.2937	(604) GAS 5	(1005) SUNNYSIDE
760	-0.0069	0.0066	-0.0046	10454.1524	(2016) GASTON CORS ARP	(1005) SUNNYSIDE
763	0.0038	0.0083	-0.0008	7092.7724	(148) L 222	(133) J 222 1982
766	0.0088	0.0011	0.0091	9136.0577	(620) GROVES NCGS 1964	(148) L 222
769	-0.0068	0.0103	0.0009	8613.4643	(2016) GASTON CORS ARP	(148) L 222
772	-0.0045	0.0004	0.0008	12361.5389	(2026) NO	(2025) N 251
775	-0.0100	0.0034	0.0079	12569.0362	(148) L 222	(2025) N 251
778	-0.0052	0.0010	-0.0033	10294.0755	(2029) PULLOFF	(637) ROBINSON
781	-0.0037	-0.0045	-0.0009	10954.4553	(637) ROBINSON	(2007) CHAPEL
784	0.0133	0.0056	-0.0062	9637.2849	(673) NORTH	(604) GAS 5
787	-0.0032	-0.0013	0.0114	11267.1313	(679) YORK	(125) W 200
790	-0.0100	-0.0013	-0.0105	11070.3812	(2016) GASTON CORS ARP	(673) NORTH
793	-0.0023	-0.0050	-0.0047	8209.2377	(2007) CHAPEL	(673) NORTH
796	0.0021	-0.0029	-0.0041	9376.4630	(2007) CHAPEL	(1005) SUNNYSIDE
799	-0.0015	0.0031	0.0021	8105.8372	(1005) SUNNYSIDE	(2025) N 251
802	0.0033	-0.0079	-0.0110	12030.0321	(679) YORK	(133) J 222 1982
805	-0.0008	-0.0011	0.0055	10719.6504	(2025) N 251	(679) YORK
808	0.0070	0.0005	0.0043	10004.6687	(604) GAS 5	(148) L 222
811	0.0043	0.0012	0.0065	9925.2937	(604) GAS 5	(1005) SUNNYSIDE
814	0.0005	0.0004	-0.0006	10454.1524	(2016) GASTON CORS ARP	(1005) SUNNYSIDE
817	0.0059	-0.0047	0.0004	10428.4793	(2026) NO	(125) W 200
820	-0.0024	0.0059	0.0004	8976.2407	(2029) PULLOFF	(2026) NO
823	0.0100	0.0043	-0.0103	7092.7724	(148) L 222	(133) J 222 1982
826	0.0021	-0.0037	0.0059	8105.8372	(2025) N 251	(1005) SUNNYSIDE
829	-0.0017	-0.0045	-0.0138	12569.0362	(2025) N 251	(148) L 222
832	0.0104	-0.0143	-0.0095	12361.5389	(2026) NO	(2025) N 251
835	-0.0043	0.0076	0.0046	9376.4630	(2007) CHAPEL	(1005) SUNNYSIDE
838	0.0004	-0.0015	0.0004	10954.4553	(637) ROBINSON	(2007) CHAPEL
841	-0.0022	0.0038	0.0065	9637.2849	(673) NORTH	(604) GAS 5
844	-0.0004	-0.0001	-0.0043	8209.2377	(2007) CHAPEL	(673) NORTH
847	0.0007	0.0023	-0.0166	11070.3812	(2016) GASTON CORS ARP	(673) NORTH
850	-0.0005	0.0103	-0.0004	12030.0321	(679) YORK	(133) J 222 1982
853	-0.0041	-0.0017	-0.0032	11267.1313	(679) YORK	(125) W 200
856	-0.0103	-0.0010	0.0113	10719.6504	(2025) N 251	(679) YORK

859	-0.0093	-0.0005	-0.0096	8105.8372	(2025) N 251	(1005) SUNNYSIDE
862	-0.0041	0.0023	0.0076	9376.4630	(2007) CHAPEL	(1005) SUNNYSIDE
865	0.0042	0.0032	-0.0151	10454.1524	(2016) GASTON CORS ARP	(1005) SUNNYSIDE
868	-0.0119	0.0051	0.0020	11070.3812	(2016) GASTON CORS ARP	(673) NORTH
871	-0.0036	0.0015	-0.0093	7061.8233	(2015) GASLIN	(1022) PARSON
874	-0.0015	-0.0042	-0.0036	10822.3674	(673) NORTH	(2015) GASLIN
877	0.0025	-0.0018	-0.0063	12122.2848	(93) FROGLEVEL	(713) RHYNE
880	-0.0028	-0.0025	-0.0076	14373.3073	(93) FROGLEVEL	(2022) LAKEVIEW
883	-0.0065	-0.0009	-0.0121	8517.5959	(2008) CHARLOTTE CORS ARP	(2022) LAKEVIEW
886	0.0078	-0.0085	0.0072	9921.7010	(2015) GASLIN	(93) FROGLEVEL
889	-0.0035	-0.0060	-0.0070	7852.5117	(217) CLT E	(239) RV 95
892	0.0063	0.0118	-0.0036	7149.0554	(239) RV 95	(620) GROVES NCGS 1964
895	-0.0010	0.0099	-0.0107	12000.0020	(1022) PARSON	(604) GAS 5
898	0.0016	-0.0039	-0.0024	9747.9628	(620) GROVES NCGS 1964	(1022) PARSON
901	0.0018	-0.0024	0.0049	11969.2247	(2016) GASTON CORS ARP	(1022) PARSON
904	-0.0065	-0.0025	0.0055	11200.7336	(217) CLT E	(499) PRODUCE
907	0.0051	0.0037	-0.0025	8474.1701	(2008) CHARLOTTE CORS ARP	(217) CLT E
910	-0.0001	-0.0027	-0.0054	13315.0114	(2022) LAKEVIEW	(713) RHYNE
913	-0.0080	-0.0010	0.0146	7429.7407	(2008) CHARLOTTE CORS ARP	(713) RHYNE
916	0.0084	-0.0047	-0.0053	9460.4588	(299) WYLIE AZ MK	(499) PRODUCE
919	0.0055	0.0031	-0.0017	7710.1133	(713) RHYNE	(239) RV 95
922	-0.0005	-0.0108	-0.0110	13005.6990	(133) J 222 1982	(299) WYLIE AZ MK
925	0.0081	0.0045	0.0041	9665.7475	(239) RV 95	(299) WYLIE AZ MK
928	0.0025	-0.0018	-0.0028	10454.1524	(2016) GASTON CORS ARP	(1005) SUNNYSIDE
931	0.0044	0.0012	-0.0026	10294.0755	(637) ROBINSON	(2029) PULLOFF
934	-0.0002	0.0069	-0.0035	14209.6261	(1005) SUNNYSIDE	(2029) PULLOFF
937	-0.0064	0.0216	0.0016	7837.5550	(2026) NO	(2023) M 77
940	0.0000	-0.0015	0.0115	8780.2367	(2029) PULLOFF	(2023) M 77
943	-0.0075	0.0010	0.0049	12000.0020	(604) GAS 5	(1022) PARSON
946	-0.0030	0.0032	0.0014	9136.0577	(620) GROVES NCGS 1964	(148) L 222
949	-0.0011	0.0032	-0.0071	10004.6687	(604) GAS 5	(148) L 222
952	0.0018	0.0034	0.0013	8613.4643	(2016) GASTON CORS ARP	(148) L 222
955	0.0077	-0.0024	-0.0056	9747.9628	(1022) PARSON	(620) GROVES NCGS 1964
958	0.0028	-0.0014	-0.0088	8976.2407	(2029) PULLOFF	(2026) NO
961	0.0005	0.0053	0.0011	7429.7407	(2008) CHARLOTTE CORS ARP	(713) RHYNE
964	0.0030	0.0106	-0.0122	10428.4793	(2026) NO	(125) W 200
967	-0.0018	-0.0061	0.0105	7837.5550	(2023) M 77	(2026) NO
970	0.0054	-0.0049	0.0033	8780.2367	(2029) PULLOFF	(2023) M 77
973	-0.0070	0.0014	0.0067	14209.6261	(1005) SUNNYSIDE	(2029) PULLOFF
976	-0.0026	-0.0018	-0.0043	10294.0755	(637) ROBINSON	(2029) PULLOFF
979	0.0029	-0.0110	0.0095	12000.0020	(604) GAS 5	(1022) PARSON
982	-0.0026	-0.0023	0.0089	9136.0577	(620) GROVES NCGS 1964	(148) L 222
985	-0.0010	-0.0045	-0.0090	10004.6687	(604) GAS 5	(148) L 222
988	0.0033	-0.0120	-0.0021	8613.4643	(2016) GASTON CORS ARP	(148) L 222
991	-0.0085	-0.0118	0.0128	8976.2407	(2026) NO	(2029) PULLOFF

System run time: Date: Wed Nov 12, 2003 Time: 07:51:42 am
 Input filename: adjqq.out
 Output filename: ellacc.out
 Accession number: 1689
 Adjust version: 4.30

Distribution of Ellipsoid Height Accuracies

OC	Number of Accuracies
--	-----
11	0
12	0
21	0
22	0
31	2
32	18
41	95
42	36
51	0
52	0
low	0

Distribution of Accuracies by Station Spacing

OC	<25km	25km - 100km	100km - 250km	>250km
--	-----	-----	-----	-----
11	0	0	0	0
12	0	0	0	0
21	0	0	0	0
22	0	0	0	0
31	2	0	0	0
32	18	0	0	0
41	95	0	0	0
42	36	0	0	0
51	0	0	0	0
52	0	0	0	0
low	0	0	0	0

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LENGTH RELATIVE ACCURACIES (USING A-PRIORI WEIGHTS)

SSN FROM STATION	SSN TO STATION	DISTANCE METERS	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(0217) CLT E	(2008) CHARLOTTE CORS ARP	8474	1:	4400000 1:	1138651 1
(0239) RV 95	(2028) POINT NCGS 1965	3577	1:	1200000 1:	1175338 1
(0239) RV 95	(2004) BELMONT	2703	1:	1400000 1:	1206339 1
(0111) GASPORT	(2034) SALUDA	4091	1:	2100000 1:	1247421 1
(0217) CLT E	(0239) RV 95	7852	1:	4700000 1:	1399834 1
(0111) GASPORT	(1035) HAVEN	4575	1:	1600000 1:	1498794 1
(0299) WYLIE AZ MK	(0499) PRODUCE	9460	1:	3100000 1:	1751267 1
(0111) GASPORT	(2017) GLOVER	4820	1:	2800000 1:	1854842 1
(0620) GROVES NCGS 1964	(2034) SALUDA	4671	1:	2400000 1:	2132407 1
(0263) TANK NCGS 1965	(0554) COMB	3310	1:	1400000 1:	2404132 1
(0299) WYLIE AZ MK	(2037) TEAK	3615	1:	1400000 1:	2426013 1
(0148) L 222	(2034) SALUDA	4815	1:	2900000 1:	2509743 1
(2004) BELMONT	(2010) CRAMER	4445	1:	2400000 1:	2568237 1
(0133) J 222 1982	(1035) HAVEN	4171	1:	2200000 1:	2636371 1
(0239) RV 95	(0620) GROVES NCGS 1964	7149	1:	4200000 1:	2660798 1
(0604) GAS 5	(2016) GASTON CORS ARP	1452	1:	1300000 1:	3003920 1
(1022) PARSON	(2040) WINDERMERE	4756	1:	3000000 1:	3043847 1
(2017) GLOVER	(2037) TEAK	3785	1:	2100000 1:	3098467 1
(1026) REDLAIR	(2024) MADORA	5138	1:	2400000 1:	3275250 1
(0299) WYLIE AZ MK	(2039) WILLOW	2623	1:	1200000 1:	3472126 1
(0172) NEARLY	(2039) WILLOW	2932	1:	1300000 1:	3630016 1
(0263) TANK NCGS 1965	(2034) SALUDA	4360	1:	1900000 1:	3842580 1
(2010) CRAMER	(2017) GLOVER	4473	1:	2500000 1:	3845496 1
(2025) N 251	(2035) SHEAR	1675	1:	520000 1:	3882014 1
(0239) RV 95	(0299) WYLIE AZ MK	9665	1:	3500000 1:	3990562 1
(0217) CLT E	(0499) PRODUCE	11200	1:	3500000 1:	4262376 1
(0172) NEARLY	(1035) HAVEN	3464	1:	1600000 1:	4364672 1

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LENGTH RELATIVE ACCURACIES (USING A-PRIORI WEIGHTS)

SSN FROM STATION	SSN TO STATION	DISTANCE METERS	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(2028) POINT NCGS 1965	(2037) TEAK	3664	1:	1500000 1:	4421419 1
(0713) RHYNE	(2024) MADORA	5112	1:	3500000 1:	4506699 1
(0620) GROVES NCGS 1964	(2004) BELMONT	4552	1:	2300000 1:	4606597 1
(0713) RHYNE	(2008) CHARLOTTE CORS ARP	7429	1:	5900000 1:	4797794 1
(0239) RV 95	(0713) RHYNE	7710	1:	4600000 1:	4917602 1
(0713) RHYNE	(2040) WINDERMERE	5728	1:	3900000 1:	4964636 1
(0723) RV 76	(0760) T 251	4445	1:	800000 1:	5093990 1
(2008) CHARLOTTE CORS ARP	(2022) LAKEVIEW	8517	1:	4600000 1:	5483569 1
(1022) PARSON	(2033) RUTLEDGE	3946	1:	1900000 1:	5485302 1
(2015) GASLIN	(2018) HINES	3956	1:	2100000 1:	5533391 1
(2010) CRAMER	(2028) POINT NCGS 1965	5390	1:	2300000 1:	5842006 1
(0554) COMB	(1025) DOOLEY	4879	1:	2800000 1:	6508422 1
(1020) CARR	(1025) DOOLEY	5052	1:	2500000 1:	6950124 1
(0148) L 222	(2006) CHANTILLY	2737	1:	1400000 1:	7217541 1
(0723) RV 76	(2027) ORCHARD	5076	1:	1300000 1:	7277126 1
(0620) GROVES NCGS 1964	(1025) DOOLEY	4865	1:	2300000 1:	7278012 1
(0299) WYLIE AZ MK	(2031) REESE	3527	1:	1600000 1:	7320783 1
(0554) COMB	(2016) GASTON CORS ARP	2148	1:	1700000 1:	7463654 1
(2010) CRAMER	(2034) SALUDA	5395	1:	3400000 1:	7851634 1
(0554) COMB	(0604) GAS 5	3578	1:	2400000 1:	7965208 1
(0660) M 40	(1005) SUNNYSIDE	4881	1:	1700000 1:	8212718 1
(2005) CATAWBA	(2033) RUTLEDGE	4887	1:	2800000 1:	8335622 1
(0093) FROGLEVEL	(2015) GASLIN	9921	1:	5600000 1:	8416138 1
(1020) CARR	(2016) GASTON CORS ARP	3339	1:	2600000 1:	8656922 1
(1020) CARR	(1021) DALLAS	4876	1:	3300000 1:	8810930 1
(0301) ALEXIS RM 2	(2020) IRON	3639	1:	1600000 1:	8854341 1
(0148) L 222	(2016) GASTON CORS ARP	8613	1:	6200000 1:	8914462 1

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LENGTH RELATIVE ACCURACIES (USING A-PRIORI WEIGHTS)

SSN FROM STATION	SSN TO STATION	DISTANCE METERS	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(1021) DALLAS	(1022) PARSON	4252	1:	3200000 1:	8966195 1
(0263) TANK NCGS 1965	(0760) T 251	3825	1:	1100000 1:	9097967 1
(0093) FROGLEVEL	(0713) RHYNE	12122	1:	6700000 1:	9368435 1
(0673) NORTH	(2020) IRON	3822	1:	1900000 1:	9395349 1
(0133) J 222 1982	(0299) WYLIE AZ MK	13005	1:	5900000 1:	10006316 1
(1022) PARSON	(2016) GASTON CORS ARP	11969	1:	10000000 1:	10034143 1
(0148) L 222	(0620) GROVES NCGS 1964	9136	1:	5500000 1:	10532884 1
(1021) DALLAS	(1026) REDLAIR	4916	1:	2400000 1:	10883931 1
(1005) SUNNYSIDE	(2013) DUKECO	4527	1:	2000000 1:	10987644 1
(0133) J 222 1982	(0148) L 222	7092	1:	3300000 1:	11148792 1
(0673) NORTH	(2015) GASLIN	10822	1:	5800000 1:	11562129 1
(2018) HINES	(2033) RUTLEDGE	3396	1:	1500000 1:	11736036 1
(0093) FROGLEVEL	(2022) LAKEVIEW	14373	1:	7200000 1:	11987088 1
(0637) ROBINSON	(2002) BAXTER	2157	1:	1000000 1:	12252387 1
(0093) FROGLEVEL	(2018) HINES	5982	1:	3100000 1:	12376875 1
(0620) GROVES NCGS 1964	(1026) REDLAIR	4712	1:	2000000 1:	12786122 1
(0660) M 40	(2027) ORCHARD	4862	1:	1500000 1:	12888535 1
(1012) FRIDAY	(1013) HOYLE	4618	1:	2700000 1:	12951442 1
(0148) L 222	(0604) GAS 5	10004	1:	6800000 1:	13973646 1
(1005) SUNNYSIDE	(2021) KINLEY	4640	1:	2200000 1:	14321923 1
(1013) HOYLE	(1014) SNAKE	4400	1:	2300000 1:	14465125 1
(1033) PINNACLE	(2030) RALPH	4473	1:	2500000 1:	14862309 1
(1025) DOOLEY	(1026) REDLAIR	4980	1:	2600000 1:	14911358 1
(2002) BAXTER	(2012) DELMAC	3055	1:	1400000 1:	15209629 1
(0679) YORK	(2025) N 251	10719	1:	4100000 1:	15244731 1
(2006) CHANTILLY	(2009) COLE NCGS 1964	2776	1:	780000 1:	15284214 1
(2005) CATAWBA	(2040) WINDERMERE	5184	1:	3300000 1:	15324892 1

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LENGTH RELATIVE ACCURACIES (USING A-PRIORI WEIGHTS)

SSN FROM STATION	SSN TO STATION	DISTANCE METERS	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(1012) FRIDAY	(1020) CARR	4644	1:	2600000 1:	15741082 1
(2013) DUKECO	(2038) WARLICK AZ MK	3689	1:	1300000 1:	15751984 1
(0525) BANK	(2003) BEAM	3771	1:	940000 1:	15857093 1
(0594) FURGUSSON	(2011) CRAWFORD	4217	1:	1700000 1:	16304970 1
(2004) BELMONT	(2024) MADORA	4793	1:	2200000 1:	16558365 1
(0604) GAS 5	(1022) PARSON	12000	1:	9600000 1:	16824710 1
(0133) J 222 1982	(2006) CHANTILLY	4548	1:	2000000 1:	16862074 1
(0620) GROVES NCGS 1964	(1022) PARSON	9747	1:	5600000 1:	16873666 1
(1005) SUNNYSIDE	(2025) N 251	8105	1:	4000000 1:	17075918 1
(0679) YORK	(1033) PINNACLE	5062	1:	2000000 1:	17854667 1
(2028) POINT NCGS 1965	(2031) REESE	4012	1:	1400000 1:	18578418 1
(0594) FURGUSSON	(0679) YORK	5258	1:	2000000 1:	19044770 1
(0301) ALEXIS RM 2	(2015) GASLIN	3370	1:	1500000 1:	19153141 1
(0792) WHITERSPOONS	(2013) DUKECO	5890	1:	2200000 1:	20481940 1
(2024) MADORA	(2040) WINDERMERE	3876	1:	2100000 1:	21101138 1
(2027) ORCHARD	(2030) RALPH	4771	1:	2500000 1:	21386179 1
(0723) RV 76	(2019) HUB	5189	1:	1400000 1:	21944062 1
(1014) SNAKE	(2015) GASLIN	3885	1:	1900000 1:	22635193 1
(0673) NORTH	(1012) FRIDAY	4754	1:	2300000 1:	22962769 1
(0554) COMB	(0723) RV 76	4837	1:	1600000 1:	23618668 1
(0125) W 200	(2026) NO	10428	1:	3000000 1:	23849944 1
(0673) NORTH	(2016) GASTON CORS ARP	11070	1:	6600000 1:	23948278 1
(0604) GAS 5	(2019) HUB	4914	1:	2600000 1:	23953963 1
(0673) NORTH	(2032) REPENTER	4541	1:	2000000 1:	24139690 1
(2007) CHAPEL	(2036) SHOALS	5012	1:	1700000 1:	24403591 1
(1013) HOYLE	(1021) DALLAS	4157	1:	2000000 1:	24738464 1
(0125) W 200	(0679) YORK	11267	1:	4000000 1:	24975919 1

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LENGTH RELATIVE ACCURACIES (USING A-PRIORI WEIGHTS)

SSN	FROM STATION	SSN	TO STATION	DISTANCE METERS	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(2001)	ANTHONY	(2007)	CHAPEL	3831	1:	1900000 1:	25041860 1
(2007)	CHAPEL	(2032)	REPENTER	3681	1:	1700000 1:	25741091 1
(0637)	ROBINSON	(2003)	BEAM	2676	1:	920000 1:	26119673 1
(1014)	SNAKE	(1022)	PARSON	3596	1:	1800000 1:	26353082 1
(0133)	J 222 1982	(2011)	CRAWFORD	2637	1:	1200000 1:	26372512 1
(2001)	ANTHONY	(2021)	KINLEY	4318	1:	1900000 1:	26672712 1
(0760)	T 251	(2009)	COLE NCGS 1964	3707	1:	770000 1:	27022229 1
(0604)	GAS 5	(1005)	SUNNYSIDE	9925	1:	7600000 1:	28307528 1
(0792)	WHITERSPOONS	(2038)	WARLICK AZ MK	3039	1:	1000000 1:	29075418 1
(1005)	SUNNYSIDE	(2007)	CHAPEL	9376	1:	5900000 1:	29621188 1
(0604)	GAS 5	(1012)	FRIDAY	5158	1:	2600000 1:	30417949 1
(0093)	FROGLEVEL	(2005)	CATAWBA	4042	1:	2300000 1:	30503268 1
(1011)	PUETTS	(2021)	KINLEY	4813	1:	2100000 1:	30719225 1
(0673)	NORTH	(2007)	CHAPEL	8209	1:	4600000 1:	31468394 1
(0792)	WHITERSPOONS	(2014)	FISHCAMP AZ MK	7086	1:	2900000 1:	32889815 1
(1022)	PARSON	(2015)	GASLIN	7061	1:	3900000 1:	34240569 1
(2003)	BEAM	(2036)	SHOALS	3462	1:	1100000 1:	34622794 1
(1013)	HOYLE	(2020)	IRON	4816	1:	2100000 1:	34759602 1
(1011)	PUETTS	(1012)	FRIDAY	4434	1:	2200000 1:	35006038 1
(2014)	FISHCAMP AZ MK	(2038)	WARLICK AZ MK	5531	1:	2100000 1:	35654210 1
(0133)	J 222 1982	(0679)	YORK	12030	1:	5300000 1:	36040246 1
(2009)	COLE NCGS 1964	(2027)	ORCHARD	4552	1:	1400000 1:	36209982 1
(0148)	L 222	(2025)	N 251	12569	1:	6500000 1:	36344983 1
(2023)	M 77	(2029)	PULLOFF	8780	1:	2900000 1:	36697097 1
(1011)	PUETTS	(2019)	HUB	4728	1:	2000000 1:	37362121 1
(2012)	DELMAC	(2014)	FISHCAMP AZ MK	5073	1:	1900000 1:	38745933 1
(0660)	M 40	(2025)	N 251	4905	1:	1900000 1:	38865901 1

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LENGTH RELATIVE ACCURACIES (USING A-PRIORI WEIGHTS)

SSN	FROM STATION	SSN	TO STATION	DISTANCE METERS	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(0792)	WHITERSPOONS	(2001)	ANTHONY	4030	1:	1600000 1:	40308897 1
(1005)	SUNNYSIDE	(2029)	PULLOFF	14209	1:	7400000 1:	43378660 1
(0637)	ROBINSON	(2029)	PULLOFF	10294	1:	4600000 1:	45769920 1
(2021)	KINLEY	(2032)	REPENTER	5961	1:	2300000 1:	46539944 1
(2006)	CHANTILLY	(2030)	RALPH	4658	1:	2300000 1:	46585058 1
(0713)	RHYNE	(2022)	LAKEVIEW	13315	1:	8900000 1:	47561364 1
(2013)	DUKECO	(2025)	N 251	4954	1:	1900000 1:	49542352 1
(1033)	PINNACLE	(2035)	SHEAR	4959	1:	2100000 1:	49598910 1
(2027)	ORCHARD	(2035)	SHEAR	5167	1:	2700000 1:	51670698 1
(0637)	ROBINSON	(2007)	CHAPEL	10954	1:	6400000 1:	52281293 1
(0525)	BANK	(2014)	FISHCAMP AZ MK	6020	1:	1500000 1:	60209861 1
(2026)	NO	(2029)	PULLOFF	8976	1:	3000000 1:	62461179 1
(1005)	SUNNYSIDE	(2016)	GASTON CORS ARP	10454	1:	9500000 1:	66925395 1
(2023)	M 77	(2026)	NO	7837	1:	2200000 1:	66932110 1
(2025)	N 251	(2026)	NO	12361	1:	4200000 1:	95893456 1
(0604)	GAS 5	(0673)	NORTH	9637	1:	5300000 1:	96372849 1

Program compgb version 1.3 (20010713) output file: COMPGB.OUT

input files

station file: SERFIL

gfile : GFILE.MOD

bfile : FINAL.BBK

Mode reductions not calculated

* * * * *

Loading SERFIL station file records into program ...

At end of SERFIL

* * * * *

Processing the GFILE.MOD gfile records ...

At end of GFILE.MOD

* * * * *

Processing the FINAL.BBK bfile records ...

At end of FINAL.BBK

* * * * *

* * * * *

At end of compgb

lprogram newchkobs ver 1.6.4 - check blue book obs data set - 1
processing input file - final.bbk

Datum Ellipsoid a 1/f b
NORTH AMERICAN DATUM-83 GRS80 63781370002982572221

1 2

input deck had incorrect structure,
context checking not performed

1 3

Input file had incorrect structure

Summary of Record Counts:

Number of *10* Records =	1
Number of *11* Records =	0
Number of *12* Records =	1
Number of *13* Records =	1
Number of *20* Records =	0
Number of *21* Records =	0
Number of *22* Records =	0
Number of *25* Records =	387
Number of *26* Records =	0
Number of *27* Records =	774
Number of *28* Records =	0
Number of *29* Records =	0
Number of *30* Records =	0
Number of *31* Records =	0
Number of *32* Records =	0
Number of *40* Records =	0
Number of *41* Records =	0
Number of *42* Records =	0
Number of *45* Records =	0
Number of *46* Records =	0
Number of *47* Records =	0
Number of *50* Records =	0
Number of *51* Records =	0
Number of *52* Records =	0
Number of *53* Records =	0
Number of *54* Records =	0
Number of *55* Records =	0
Number of *60* Records =	0
Number of *61* Records =	0
Number of *70* Records =	8
Number of *71* Records =	0
Number of *72* Records =	8
Number of *80* Records =	77
Number of *81* Records =	0
Number of *82* Records =	0
Number of *83* Records =	0
Number of *84* Records =	0
Number of *85* Records =	0
Number of *86* Records =	77
Number of *90* Records =	0

1

4

1 2 3 4 5 6 7
123456789012345678901234567890123456789012345678901234567890123456789

504 *** FATAL *** EXTRANEIOUS DATA AFTER TRAILER RECORD

Summary from program Newchkobs:

Number of records in input file = 1337, number of errors found = 1

PROGRAM OBSCHK V 2.7.0

BLUE BOOK B-FILE - final.bbk

BLUE BOOK G-FILE - gfile.mod

SHORT (W/O 70I - 73I REC) OUTPUT FILE - obschk.out

LONG (W 70I - 73I REC) OUTPUT FILE - obschk1.out

** (1) BLUE BOOK OBSERVATION FILE DATA CHECK

** (2) BLUE BOOK G-FILE DATA CHECK

** ALL *25* RECORDS USED

PROGRAM OBSCHK TERMINATED

PROGRAM OBSDES V 2.5

Bfile (4-digit ssn) - final.bbk
Description file (D-file format) - dfile
Obsdes output file - obsdes.out

ALL OF THE BFILE 80 RECORDS HAVE A DESCRIPTION OR RECOVERY NOTE

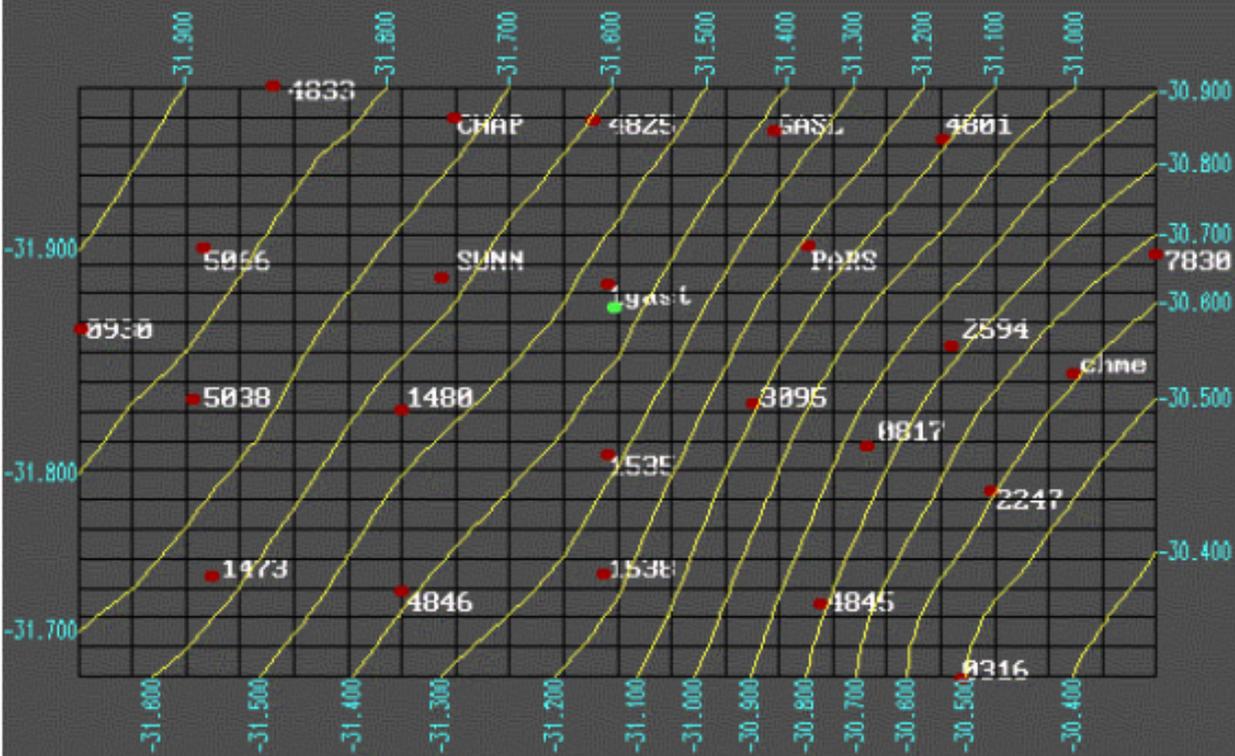
NO 82 RECORDS FOUND IN THE BFILE

THE FOLLOWING BFILE 80 RECORDS HAVE 25 RECORDS
AND NO DFILE @ REC CC 203 SATELLITE USAGE CODE = Y

SSN	STATION NAME
2008	CHARLOTTE CORS ARP
2016	GASTON CORS ARP

PROGRAM OBSDES TERMINATED

Geoid 99 Conterminous U



10000m

ESC = EXIT

F6 = FULL VIEW

F8 = SET UPPER LEFT

F7 = SET LOWER RIGHT